Pandit Dwarka Prasad Mishra
INDIAN INSTITUTE OF INFORMATION TECHNOLOGY,
DESIGN AND MANUFACTURING JABALPUR

Minutes of the SENATE/2010-11/ 2nd Meeting of the SENATE held on March 12, 2011 from 11:00 a.m. in the Conference Hall of PDPM IIITDM Jabalpur. Following members were present.

1. Prof. Aparajita Ojha	Chairperson
2. Prof. (Mrs.) M. Adhikari (Not available after the agenda item Senate/2010-11/2.10)	Member
3. Prof. Amit Ray (Not available after the agenda item Senate/2010-11/2.08)	Member
4. Prof. B. L. Mishra	Member
5. Prof. Laxman Pandey	Member
6. Prof. Krishna Reddy	Member
7. Prof. Puneet Tandon	Member
8. Dr. Tanuja Sheorey	Member
9. Dr. V. K. Gupta	Member
10. Dr. Sameer Khandekar	Member
11. Dr. Pritee Khanna	Member
12. Dr. Prabin Kumar Padhy	Member
13. Col. (Retd.) P. S. Sandhu	Secretary

Following special invitees from among the members of academic staff of PDPM IIIT DM Jabalpur were also present.

1. Dr. P. N. Kondekar
2. Dr. Atul Gupta
3. Dr. R. K. Pandey
4. Mr. T. V. K. Gupta
5. Mr. D. S. Ramteke
6. Mr. Bishwajeet Mukherjee
7. Mr. Saket Saurav

Following members expressed their inability to attend the meeting due to their prior commitments:
(i) Prof. R. Chatterjee (ii) Prof. S. K. Choudhary (iii) Prof. P. C. Das (iv) Prof. H. P. Dikshit (v) Dr. Ashish Dutta (vi) Prof. Vinayak Eswaran (vii) Prof. Phalguni Gupta (viii) Prof. Manoj Harbola (ix) Prof. P. K. Jhinge (x) Prof. Uday Khedkar (xi) Dr. Mukesh Kumar Roy (xii) Prof. Huzur Saran.

The Following members remained absent from the meeting and conveyed a letter to the Chairperson, Senate stating the reason of their absence (Copy of the letter enclosed as SENATE/2010-11/2/Annexure V).

(i) Dr. Subir Singh Lamba (ii) Dr. Bhupendra Gupta (iii) Dr. M. Ravibabu

After the initial welcome remarks by the Chairperson, Senate, the agenda items were taken up one by one.

Senate/2010-11/2.01 **Overview report of the Chairperson, Senate**

The Chairperson discussed the following points-

(i) Faculty members of the Institute have participated in various international conferences /workshops /seminars and symposia with many of them having full paper published / to be published in the conference proceedings (peer reviewed).

(ii) Following persons have been nominated as new members of the Board of Governors for a period of three years.
1. Prof. Shyamasunder, Senior Professor, TIFR, Bombay
2. Prof. U.B. Desai, Director, IIT Hyderabad
3. Prof. Pradeep Mathur, Director, IIT Indore
4. Shri Arun Jain, Chairman and CMD, Polaris, Chennai

Term of the following members of the Board has been completed. Prof. S.G. Dhande, Prof. D.P. Singh, Prof. Manoj Harbola, Dr. Manoj Gaur.

(iii) A Center of Research and Innovation is going to be launched on March 14, 2011 which is a joint venture of PDPM IIIT DM Jabalpur and Altair India Ltd.

Senate/2010-11/2.02 **Confirmation of the minutes of the SENATE/20010-11/1st Meeting of the SENATE held on December 24, 2010**

Senate accepted the following changes proposed during the meeting/ received before the meeting.

(i) Item Senate/2010-11/1.08: The proposal of M. Tech. in Mechatronics was accepted with suggestions for certain minor changes in the course structure. It was suggested to work out the details of the course structure and contents. Further, the Chairperson, Senate was authorized to approve the suggested changes.

(ii) Item Senate/2010-11/11.2 Line 1. Please read "Professor English" as "Professional English".

(iii) Dr. Sameer Khandekar's name to be included in the list of members who expressed their inability to attend the meeting.

(iv) Item 4 of Senate/2010-11/1.01 – Overview Report of the Director. It was suggested to mention the nature of the conference/symposia etc. for which financial support was provided to the faculty. The Chairperson, Senate informed the members that most of the conferences were international conferences.

The Chairperson asked the Secretary, Senate to inform the house about a letter that was sent by three members of the Senate (Dr. S.S. Lamba, Dr. Bhupendra

Gupta and Dr. M. Ravibabu) on March 12, 2011 just half an hour before the commencement of the meeting. The Secretary, Senate informed the members that the three members who abstained from attending the SENATE/2010-11/2nd meeting had expressed in the letter that they have some views on the minutes of the SENATE/2010-11/1st meeting held on December 24, 2010 and hence requested the Senate to postpone the confirmation of the minutes to the next Senate meeting. No specific comments/views were expressed in the letter. The matter was placed before the Senate. It was asked from the Secretary whether sufficient time was given to the members to express their views. The Secretary informed the members that the minutes were circulated on January 6, 2011 by email and later in hardcopies also and comments were invited within 15 days. However as per the normal practice the comments/suggestions etc. received till the next Senate meeting are considered. Some of the members expressed their views that the confirmation of minutes cannot be postponed indefinitely. After deliberation on the issue, Senate unanimously agreed that such a request cannot be accepted at this juncture as sufficient time was given to send the comments after circulation of the minutes and letter does not specify any justifiable reasons.

The Senate unanimously approved the minutes of SENATE/2010-11/1st meeting held on December 24, 2010 with minor modifications as listed above.

It was also decided that the comments /suggestions will be invited within 15 days from the date of circulation of the minutes of the meeting so that all such comments /suggestions could be compiled and communicated to other members with the next agenda notes. However, additional comments /suggestions on the circulated minutes may be discussed in the next meeting with the approval of the Chairperson, Senate, before the minutes are confirmed. It was also suggested to keep an upper bound of one month for preparing and circulating the minutes, as far as possible.

Further, there was a discussion on inviting a person in a Senate meeting as special invitee. The Chairperson, Senate, informed the house that all faculty and research engineers are being invited for Senate meetings keeping in view that the Institute is in developing stage, faculty strength is small and the Institute wishes to have maximum participation of young minds in academic matters. However, as the number of faculty will grow, the Institute will have to review some of these practices. Senate also discussed the rights of invited members and it was opined that the time is ripe to frame the code of conduct for Senate meetings.

Senate/2010-11/2.03 **Proposed Guidelines for Project Based Internship (PBI)**

A draft manual of procedures and guidelines for the project based internship was placed before the Senate by Prof. Puneet Tandon (Convener, Curriculum Restructuring Committee) giving all the details. Following points were discussed /decisions were taken during the meeting:

(i) Dr. Sameer Khandekar observed that the proposed document fixes the responsibility of intern, host and supervisor but does not mention about the responsibility of the Institute. He suggested that the Institute's responsibility and in particular the responsibility of the faculty as a part of the Institute should also be clearly specified.
(ii) He also asked about the Institute's role in providing project based internships to students in and outside the Institute.

It was pointed out by one of the members that in section 3.3 para 2, responsibilities of the Institute have been stated briefly that specify that the Institute will gradually develop a list of units where the students can take up project based internships. After deliberation on the issue, following method was proposed to fix up the responsibility of the Institute.

(iii) 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.
(iv) 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.
(v) 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.

The Senate approved the proposal. It was further decided that

(vi) Dates of the continuous project assessment should be fixed in advance and specified in the academic calendar every year.

(vii) The load of PBI will be counted as academic load and every faculty needs to share this academic load.

At this juncture, it was brought to the notice of the Senate that the Institute presently does not have any formula for calculation of academic load. Hence it was decided to constitute the following committee to suggest a formula for the academic load including the load for the project based internship.

(a) Prof. Krishna Reddy - as Chairman
(b) Dr. Sameer Khandekar - as member
(c) Dr. Vijay Kumar Gupta - as member and convener
(d) Dr. P.N. Kondekar - as member
(e) Dr Dinesh Kumar Vishwakarma - as member

The committee was requested to submit the report so that the same may be placed in the next Senate meeting.

(viii) A student working on an external project will 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.

(ix) After discussions, following project assessment weightage was decided for in-house and externally carried out projects.

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	

(x) 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. Dr. Khandekar suggested that Dr. Phani of IIT Kanpur may be consulted for getting the details and guidance to convert students' ideas to patentable documents.

At this point some of the members /special invitees raised the issue of a student wanting to withdraw from an external PBI. It was suggested that such practices should not be encouraged in general, however in exceptional circumstance it

was decided that the student may be allowed 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.

Prof. Pandey suggested encouraging entrepreneurship also through PBI. The Senate unanimously appreciated the idea and it was suggested to work out the details for implementing the idea.

(xi) The faculty members would give some of the courses from among the list of courses under NPTEL according to their areas of specialization. The evaluation of all the students registered for a course will be done by the concerned faculty.

Some of the members also wanted to know if some financial support would be provided to support the PBI. The Chairperson informed the members that although there is no commitment of the Institute to provide financial support, some small financial incentives may be arranged for projects which do not have any financial support from other resources.

Senate/2010-11/2.04 **Proposal of the Curriculum Restructuring Committee regarding the Learning objectives and course outcomes**

Proposal of the Curriculum Restructuring Committee regarding the learning objectives was discussed in the meeting (SENATE/2010-11/2/Annexure III). After long deliberation, the proposal was accepted with the following modifications in the learning objectives and course outcomes of some of the courses.

HS 102 Culture and Human Values (2L + 1GD)

Learning Objectives and Course Outcome: The course is expected to familiarize the students with the wisdom of ancient and modern literary texts representative of a broad spectrum of thoughts. The program is framed to enhance the general awareness of the students in the area of inter-cultural understanding and human values. The proposed exercise executed through group discussion and writing skills will also improve the communication capabilities of the students.

MS 301 Management : Concepts and Techniques (3L)

Learning Objectives and Course Outcome: This course is designed to train the undergraduate students regarding the basic concepts of management. To make the students understand comprehensively the subject, the theory is supplemented with the discussions on many real life problems in the form of case-studies.

DS 302 Engineering Design (2L+4P)

Learning Objectives and Course Outcome: The course is meant to nurture creativity, innovation and ideas. The objective of the course is to recognize critical elements in creative domain of engineering design and product/process development strategy. The course also aims to make the students understand that with rapid shrinking of the world with technologies spreading freely without borders and people demands getting more complex, the understanding of a problem can be understood holistically through extensive teamwork only; and the role of a designer is to act as a bridge between these diverse fields in such a team. The course would also include detailed designing of a product in resonance with the user requirements through interdisciplinary approach.

ES 102 Engineering Literacy (3P)

Learning Objectives and Course Outcome: The purpose of the course is to sensitize the students towards the nuances between sciences, engineering and engineering sciences. Through some case studies, the course aims at exposing the students to natural processes and their useful applications in developing socially useful products.

Senate/2010-11/2.05 **Floating of Courses During Project Based Internship**

After deliberation the Senate approved the proposal with following conditions.

(i) A student can register in not more than two backlog courses during the project based internship with atmost one course in the summer semester and one course in the running Semester I of the academic session during which project based internship is being carried out.

(ii) Such students will also be required to stay in the campus and will do in-house project during the period in which they have registered for a backlog course.

Senate/2010-11/2.06 **Case of AnamikaVerma: To allow the student to register in three courses during the period of project based internship to clear her backlogs**

The item was placed before the Senate and the case was explained by the Chairperson, Senate to all present in the meeting. As per the recommendations made in the pre-Senate meeting it was unanimously decided to present this case in a subsequent meeting of the Senate after the student completes her semester IV. The decision was taken with the view that the student may improve her CPI (≥ 8.0) and become eligible for taking up overload in future semesters. It was directed to chalk out the complete plan for the student with various possible options so that the student could complete the degree within the stipulated time. The observation made by Mr. Saket Saurav that the period of the residential requirement should be considered before chalking out a plan for

her completion of degree was also considered. In this connection the suggestion made by Prof. Ray to extend her programme upto the summer semester after the completion of her eighth semester was discussed. The matter was finally deferred with the above decision and observations.

Senate/2010-11/2.07 **Nominations for the New Conveners of the Standing Committees of the Senate**

The members unanimously agreed that the conveners should be nominated for a period of two years. The term could be extended to another period of two years with the consent of the person having the charge and on the approval of the Chairperson, Senate. The extension should be later reported to the Senate. The process of the change of conveners should be made simultaneously. It was further decided to continue with the present conveners and their term would be counted from the retrospective effect (i.e., w.e.f. April 1, 2010). The Senate also authorized the Chairperson, Senate to take appropriate action in case some of the conveners do not wish to continue. In such cases the nomination of the new conveners of the Standing Committees of the Senate would be for the remaining term of the present convener. It was also decided that normally the total duration of convenership of a person should not exceed more than two consecutive terms.

Senate/2010-11/2.08 **Proposal for Ph.D. in Design**

A proposal for Ph.D. programme in Design was approved with the following directive/modifications.

(i) The PG manual should be carefully reviewed to avoid any overlaps and ambiguities.

(ii) A student should be allowed to appear in comprehensive examination after the completion of four courses. Remaining four courses can be done by the student later on during his research period.

Senate/2010-11/2.09 **Discussion on the procedure of Add and Drop courses for students having backlogs**

Members and other special invitees proposed different models. The model followed in IIIT Hyderabad was also explained by Prof. Reddy. Following points emerged during the meeting.

The members and other special invitees recommended giving full freedom to students to choose their courses in each semester with upper limit of total credits in each semester. Such a student will have the choice to opt for a regular course running in the current semester or a backlog course that is also running in the current semester. However, pre-requisite of the course must be considered during the allotment of the courses. Members were of the view that

pre-academic registration must be done in order to implement such an option. Some other faculty members suggested that the student should not be allowed to move up to next semester if the number of backlogs increased beyond a specified number.

After long deliberations, it was decided to constitute the following committee to suggest a comprehensive solution to the problem of adding and dropping of courses for the students having backlogs.

1. Prof. Krishna Reddy, Chairman
2. Prof. B. L. Mishra, member
3. Dr. Atul Gupta, member and convener
4. Dr. P.K. Padhy, member

Senate/2010-11/2.10 **Relief from PhD Programme**

The comments of the Senate members were considered on the proposal circulated to them on 28th January, 2011 and the modified proposal for relaxation from Ph.D. programme was placed before the Senate. The proposal was finally approved by the Senate with the following additional conditions/modifications.

(i) The title of the category would be "External - Self Supported" in place of "Relaxed Regular Category".
(ii) In case a student wants to leave the Ph. D. programme to take up a job offer, he/she should have applied for the job through proper channel (PhD guide(s) and on the approval of the Convener, PGCS).
(iii) The student would be required to submit a no objection certificate from his future employer that he/she would be allowed to continue with the PhD programme.

It was suggested by Dr. Khandekar that the relief from PhD programme should generally be discouraged. It should be considered only in exceptional circumstances and on the recommendation of the guide(s). The suggestion was supported by others present in the meeting, keeping in view that a PhD student is well groomed for research by his guide and considerable time and energy is devoted by the guide to bring him to the level from where he can start making meaningful contribution towards research. At this level, if the student leaves the Institute, it would be a loss to the Institute at large and to the guide in particular. The suggestion was unanimously approved by the Senate.

Senate/2010-11/2.11 **Ratification on the approval accorded by the Chairperson, Senate**

The approvals accorded by the Chairperson, Senate from time to time on various items/issues/proposals were placed in the Senate. All the matters were also read out by Dr. Padhy, Coordinator, Academic Affairs and the matters were unanimously ratified by the Senate.

Senate/2010-11/2.12 **Any other item with the permission of the Chair**

Senate/2010-11/2.12.1 Creation of additional teaching positions

In view of the students' strength increasing to 837 from the present strength of 661, the number of teaching positions also needs to be increased to 70 from the present strength of 65. It was recommended to the Board of Governors to create 5 additional posts of assistant professors.

Senate/2010-11/2.12.2 Suggestions for possible names of the Chief Guest for Convocation 2011

The suggestions were invited by the Chairperson for the Chief Guest for 3rd Convocation, 2011. The various names suggested were as follows:

(a) Padmashree Dr. T. V. Ramakrishna, FRS, presently with Banaras Hindu University as Bhabha Chair Professor.
(b) Dr. E. Sreedharan, Managing Director, Delhi Metro
(c) Mr. S. Ramadorai, Chairman of Tata Elxsi and Vice-Chairman of Tata Consultancy Services Ltd.
(d) Mr. Nandan Nilekani, Chairman, Unique Identification Authority of India (UIDAI),
(e) Dr. S. Banerjee, Chairman, Atomic Energy Commission.

The Senate unanimously recommended to the Board of Governors the above names and also authorized the Chairperson, Senate to explore other eminent persons' availability in case the above persons are not available to become the Chief Guest of the Convocation.

Senate/2010-11/2.12.3 About the date of next Senate Meeting

On the suggestion of one of the Senate members, the Chairperson Senate proposed that in each Senate meeting if a date-slot for the next meeting is tentatively decided, it would enable the members to plan their schedule well in advance. The proposal was unanimously accepted by the Senate. Accordingly the date-slot for the SENATE/2010-11/3rd meeting was decided to be in first week of June, 2011 between Thursday –Saturday.

Senate/2010-11/2.12.4 A letter sent by three members of the Senate and a subsequent mail sent by Dr. S.S. Lamba, Member, Senate.

Two of the members raised the issue of derogatory and threatening language used by the three Senate members namely Dr. S.S. Lamba, Dr. M. Ravibabu and Dr. Bhupendra Gupta while addressing to the Chairperson, Senate in their letter (SENATE/2010-11/2/Annexure V). The Senate took note of the issue of conveying the comments through a letter to the Chairperson, Senate when they

were actually present in the Institute and not attending the meeting. As informed by one of the members, the same letter was also mailed to every faculty member by Dr. S.S. Lamba 49 minutes after the meeting started. The members observed that the act by Dr. S.S. Lamba clearly reflected that the mail was sent with the intention of making a sensation among the faculty.

After deliberations, the act of using derogatory language in the letter was strongly deplored by a voice vote unanimously. The Senate also suggested that the matter be taken to the Board of Governors for advice.

Senate/2010-11/2.12.5 Condolences for the victims of calamity in Japan

The Senate expressed its deepest condolences for the victims of the recent earthquake and Tsunami that hit Japan on March 11, 2011. A silence of two minutes was observed to mourn for the victims of the calamity and to pray for restoration of normalcy and peace in Japan.

The meeting ended with a vote of thanks to the Chair.

March 21, 2011

Col. (Retd.) P. S. Sandhu
Secretary

Put up for approval please.

21 Mai 2011

Chairperson Senate
PDPM IIIT DM
JABALPUR

Approved
AOjha
22-3-2011

PDPM
INDIAN INSTITUTE OF INFORMATION TECHNOLOGY, DESIGN AND MANUFACTURING JABALPUR

2010-11 /2nd MEETING OF THE SENATE
To be held on March 12, 2011 at 11.00 am in Conference Hall of the Institute

AGENDA NOTES

Contents

Senate/2010-11/2.01 Overview report of the Chairperson, Senate

To be tabled during the meeting.

Senate/2010-11/2.02 Confirmation of the minutes of SENATE/20010-11/1st Meeting of the SENATE held on December 24, 2010

Minutes of the 2010-11/2nd meeting of the Senate were circulated to the members after the approval from the Chairperson. Minutes are also included herewith as SENATE/2010-11/2/Annexure I (Pg. No 5 to 14). Following comments have been received from the members.

(i) **Item Senate/2010-11/1.08**: The proposal of M. Tech. in Mechatronics was accepted with suggestions for certain minor changes in the course structure. It was suggested to work out the details of the course structure and contents and the Chairperson, Senate was authorized to approve the suggested changes.

(ii) **Item Senate/2010-11/11.2** Line 1. Please read "Professor English" as "Professional English".

The Senate is requested to approve the minutes with the above modifications.

Senate/2010-11/2.03 Proposed Guidelines for implementation of Project Based Internship at the seventh semester

A draft of the manual of procedures and guidelines for project based internship is placed at SENATE/2010-11/2/Annexure II (Pg. No 15 to 22). The Senate is requested to deliberate on the proposal for approval.

Senate/2010-11/2.04 Proposal of the Curriculum Restructuring Committee regarding the learning objectives and course outcomes

Proposal of the Curriculum Restructuring Committee regarding the Learning objectives and course outcomes is included as SENATE/2010-11/2/Annexure III (Pg. No 23 to 27). The Senate is requested to deliberate on the proposal for approval.

Senate/2010-11/2.05 Floating of Courses During Project Based Internship (Summer and 7th Semester) for students having backlogs

Project Based Internship will be implemented for students immediately after the completion of 6th semester and will also involve 7th semester. The load for this internship is of 16 credits. Students, who have backlog of courses, normally utilize the summer semesters to clear their backlogs. It is proposed to allow the students to clear their backlogs alongwith the project based internships. It is also proposed to have an upper limit of two courses for such students. Such students will also be required to stay in the campus and to do in-house project during the period in which they have registered for the courses.

Senate/2010-11/2.06 Case of Anamika Verma: To allow the student to register in three courses during the period of project based internship to clear her backlogs

Ms. Anamika Verma was admitted to the Institute on the orders of Hon'ble High Court of Andhra Pradesh from the second semester. Her performance has been satisfactory in the past two semesters. However, she has not been able to score >= 8.00 CPI to become eligible for taking the overload. Due to this her backlog is continuing. In order to help her complete her course requirement within the specified timeframe, it is proposed to allow her to register in three courses apart from her project based internship.

Senate/2010-11/2.07 Nominations for the New Conveners of the Standing Committees of the Senate

Conveners of the following Standing Committees of the Senate need to be nominated to officiate w.e.f. 1-4-2011.

a) Undergraduate Committee of the Senate (UGCS)

b) Postgraduate Committee of the Senate (PGCS)

c) Library Committee of the Senate

d) Students Prizes and Awards Committee of the Senate

e) Students Advisory Committee of the Senate

The Senate is requested to nominate new conveners for the above committees.

Senate/2010-11/2.08 Proposal for Ph.D. in Design : Courses and their Contents

A proposal for Ph.D. programme in Design was placed before the Senate in SENATE/2010-11/1st Meeting of the SENATE held on 24th December 2011. Certain modifications were suggested by the Senate in the proposed research areas. As per the suggestions, a proposal of the courses and their contents is placed at SENATE/2010-11/2/Annexure IV (Pg. No 28 to 35). The Senate is requested to deliberate on the proposal for approval.

Senate/2010-11/2.09 Discussion on the procedure of Add/Drop courses for students having backlogs

Arrangement of Add/Drop courses for the students with backlogs, academic probation and termination has become very difficult with increasing number of students and limited number of faculty. Sometimes even the unavailability of lecture halls makes it difficult to schedule the timetable keeping in mind the students with backlogs. Apart from this, students remain unsatisfied with the advice of the Institute to add or drop courses. In view of these difficulties, it is proposed to discuss the matter in the Senate to evolve a better system for such students who have backlog of courses. It is also proposed to give full freedom to students to choose their courses in each semester with upper limit of total credits in each semester. Such a student will have the choice to opt for a regular

course running in the current semester or a backlog course that is also running in the current semester. However, pre-requisite of the course must be considered during the allotment of the courses and the choice made by the student would require vetting by the UGCS within three days from the commencement of the semester. The Senate is requested to deliberate on the proposal for approval.

Senate/2010-11/2.10 Relief from PhD Programme (Relaxed Regular category)

The agenda was circulated to senate members for resolution through circulation and for getting opinion/suggestions/comments of the members. Based on the suggestions received from the members, the proposal of relaxation from the PhD programme is modified as follows.

Clause 2.3.4: Relief from PhD Programme (Relaxed Regular category)

A PhD Scholar in regular category who gets a job offer can get relief from the programme as a special case, while keeping her/his registration alive on payment of required fees every semester with the consent of the thesis supervisor(s) and on the recommendation by the Convener, PGCS with due approval of the Chairperson Senate if she/he has completed successfully –

(a) Required minimum course work,
(b) Comprehensive Examination,
(c) Minimum residential requirements,
(d) At least one Progress seminar with proper direction of research.

The student is required to give one progress seminar before the Evaluation Board as per the following guidelines in each semester.

The Evaluation Board of a Doctoral student shall consists of at least three but not more than five faculty members from the discipline of the student including his/her supervisor (s) and one faculty member from a different discipline.
The Evaluation Board shall be proposed by the thesis supervisor(s) and approved by the Convener of the PGCS. The thesis supervisor of the student shall be the Convener of the Board. The maximum duration in which a student should be required to submit her/his thesis under this category shall be normally of six years.

Senate/2010-11/2.11 Ratification on the approval accorded by the Chairperson, Senate

From time to time approvals are accorded by the Chairperson, Senate on various items/issues/proposals. Senate is requested to ratify the decisions taken/approval accorded by the Chairperson, Senate.

Senate/2010-11/2.12 Any other item with the permission of the Chair

Pandit Dwarka Prasad Mishra
Indian Institute of Information Technology,
Design & Manufacturing, Jabalpur

Minutes of the SENATE/2010-11/ 1st Meeting of the Senate held on December 24, 2010 from 11:00 a.m. in the Conference Hall of PDPM IIITDM Jabalpur.

Following persons were present:

01. Prof. Aparajita Ojha	Director, PDPM IIITDM Jabalpur	Chairperson
02. Prof. H.P. Dikshit	Director General, SGG&PA Bhopal	Member
03. Prof. R. Chatterjee	IIT Delhi	Member
04. Prof. B.L. Misra	R.D. University, Jabalpur	Member
05. Prof. Laxman Pandey	R.D. University, Jabalpur	Member
06. Prof. P. Krishana Reddy	IIIT Hyderabad	Member
07. Prof. P.K. Jhinge	Principal, JEC, Jabalpur	Member
08. Prof. Uday Khedkar	IIT Bombay	Member
09. Prof. Puneet Tandon	PDPM IIITDM Jabalpur	Member
10. Dr. Tanuja Sheorey	-do-	Member
11. Dr. V.K. Gupta	-do-	Member
12. Dr. Pritee Khanna	-do-	Member
13. Dr. Subir S Lamba	-do-	Member
14. Dr. Mukesh Roy	-do-	Member
15. Dr. Bhupendra Gupta (was not available during the discussions in agenda items 8, 9 and 10)	-do-	Member
16. Dr. M. Ravibabu (was absent after the lunch)	-do-	Member
17. Mr. Raghunath Bhattacharya		Actg. Secretary

Following special invitees were also present

1. Dr. Atul Gupta	PDPM IIITDM Jabalpur
2. Dr. Prabir Mukhopadhyay	-do-
3. Dr. H.Chelladurai (was absent after the lunch)	-do-
4. Dr. Ashutosh Shrivastava	-do-
5. Dr. Hari Voruganti (was absent after the lunch)	-do-
6. Mr. TVK Gupta	-do-
7. Mr. Saurav Saket	-do-
8. Mr. D.S. Ramteke	-do-
9. Mr. Bishwajeet Mukherjee	-do-

Following members expressed their inability to attend the meeting due to their prior commitments.
(i) Prof. S.K. Choudhary (ii) Prof. PC Das (ii) Prof. Phalguni Gupta (iv) Dr. Ashish Dutta, (v) Prof. Manoj Harbola and (vi) Prof. Amit Ray (vii) Prof. M. Adhikari.

After the initial welcome remarks by the Chairperson, Senate, the agenda items were taken up one by one.

Senate/ 2010-11/1.01	Overview Report of the Chairperson

The Chairperson, Senate presented a report on the activities of the Institute which included the following:

1. Admissions – Increase in intake of B. Tech. Programme from 183 to 261.
2. Institute becomes the examination centre for AIEEE online examination 2011.
3. Following projects have been submitted /under progress/under the process of submission.

International Collaborative Projects -

(a) Development of a micro pump with NEMS sensing function for an automatic blood collecting and measurement system. It is a DST-JSPS joint collaboration project. Partners from Japan are Dr. Shinichi Warisawa, University of Tokyo, School of Engineering and Dr. Kazuyoshi, Tsuchiya, Tokai University.

Professor Puneet Tandon, Dr. Tanuja Sheorey and Dr. Vijay Gupta are collaborating on the project.

(b) Application of nanoparticles in microbio-assay (funded by JSPS).

(c) Development of rapid and high reliable diagnostic method for prevention of emerging and reemerging infectious disease (funded by Tokyo Govt and Tokyo Metropolitan University (2010-2015)).

Dr. Mukesh Kumar Roy is collaborating with Prof Ming Yang of Tokyo Metropolitan University (TMU) on the above two projects related to Nanotechnology applications in bio-medical sciences.

(d) Evolution of nanophotonics from semiconductor photonic crystal device to metal plasmonic device.

(e) Plsmonic Nanoantenna and their applications in Nanophotonics – to be submitted to JSPS (India) – DST (Japan) soon.

The above two projects are being handled by Dr. Dinesh Kumar Vishwakarma of the Institute and Prof. Kiyoshi Asakawa, University of Tsukuba, Japan.

(f) Nano-Scale MOSFET's-Scalability Issues and Potential Dielectrics.

It is a DST-JSPS supported project with Prof. Hiroshi Iwai from Tokyo Institute of Technology, Japan and Dr. Asutosh Shrivastava from the Institute.

(g) Motion control of mobile robot

Between Prabin Kumar Padhy of the Institute and Professor Hideki Hashimoto of University of Tokyo – The project submission is under process.

Projects of National Importance -

(a) Development of virtual laboratory on Automated systems (Mechatronics)
(b) Development of virtual laboratory on Manufacturing.

Dr. Tanuja Sheorey and Dr. Vijay Gupta are working on these projects on development of virtual labs supported by National Mission for Education through ICT (NMEICT). These projects are part of a larger project sanctioned to IIT Kanpur. Project was introduced by Dr. Sameer Khandekar, IIT Kanpur. These projects are of national importance and the prepared material will be uploaded in NMEICT webpage for the benefit of engineering students across India.

Apart from this the faculty members are also working on a number of sponsored research /development projects.

4. Financial support has been provided to all the thirteen members of the faculty / research engineers who have applied for participation in conferences/workshops/symposia.

5. The Institute is planning to participate in the Design Clinic Scheme of Ministry of Micro, Small and Medium Scale Enterprises. The scheme aims at building a common platform of interaction between MSME sector and design experts to provide expert advice and solutions on real time design problems, resulting in continuous improvement and value addition for existing products. A core group of four members has been constituted by the Director with following members – Prof. Amit Ray, Dr. P.K. Jain, Dr. Prabir Mukhopadhyay (Coordinator) and Mr. TVK Gupta. Initial discussions have been started with some of the local MSME representatives.

6. First Design Workshop – DeW 2010 was organized by the Institute during October 11-15, 2010. Workshop was well attended by industry people and academicians. 75 participants in the workshop including 23 resource persons. Technical lectures were delivered by eminent experts that included - Professor Ralph Bruder from Technical University of Darmstadt, Professor S.G. Dhande, IIT Kanpur, Professor Gurumoorthy, IISc Bangalore, Professor Imre Horvath and Dr. Zoltan Rusak from Technical University of Delft,Professor Karunakaran, IIT Bombay and seven experts from Universities and industries of Japan including Professor Y. Ito and Professor M. Kiuchi. Professor Puneet Tandon and Dr. Prashant Kumar Jain were the convener and as co-convener respectively of the workshop with organizing and technical support from many faculty members of the Institute.

Senate/ 2010-11/1.02	**Confirmation of the minutes of 2009-10/2nd meeting of the Senate held on July 10, 2010**

The Senate confirmed the minutes of 2009-10/ 2nd meeting of Senate held on July 10, 2010 by accepting the modifications as per the following comments received from members.
(i) Professor P.K. Jhinge's name to be included in the list of members who were present.
(ii) Item no. Senate/2009-10/2.07: Some amendments in the manual of procedures and guidelines of Students Prizes and Awards Committee of Senate (SPACS) of the Senate. The point No (4) should be written as "Read 4.5.3 as follows" instead of "Read 4.5.4 as follows"
(iii) Item no. Senate/2009-10/2.05: Discussion on the curriculum structure. The

suggestion listed at (e) on a reading course of 2 credits from NPTeL was given by Dr. Sameer Khandekar.

Senate/ 2010-11/1.03	Reports of the UGCS, PGCS, SACS, LCS

The Academic Coordinator (in charge) presented a report of the UGCS and PGCS. Following items were reported and discussed.

1. In the odd semester 2010-11 starting from August, 2010, 250 B.Tech. students had taken admission out of which 13 students have withdrawn from the programme. He also reported that 19 PG students had taken admission in the same semester, out of these 4 students have withdrawn and one student has taken a semester leave. Admissions for remaining seats of PG were recently held and result was declared on December 21, 2010.

2. Three PG students have completed their requirement for the degree after August 2010.

   Some of the Senate members initiated discussion on the process of admission in Ph.D. programme and suggested the following –

   a. Prof. Reddy suggested that provisional admission be given in the programme so that the candidate's aptitude for research could be judged in a semester's time before the candidate is formally registered for the Ph.D. programme.
   b. Prof. R. Chatterjee suggested considering only NET/GATE qualified candidates for Ph.D. programme to ascertain only good quality candidates for possible admissions in Ph.D.
   c. Professor H.P. Dikshit suggested to keep the options open for candidates which are gifted and do not satisfy formal eligibility criterion.

   It was clarified by the Coordinator Academic Affairs/ Chairperson, Senate that (i) A student enrolled for Ph.D. programme is required to do course work and has to clear all course work requirement alongwith passing a comprehensive examination before she/ he is confirmed as a Ph.D. student (ii) The Institute is presently running Ph.D. programme in engineering only and the eligibility criterion for admission to Ph.D. programme is at par with that in IITs. When the programme would be extended to natural sciences, the suggestion of the Senate member for NET/GATE as an essential requirement would also be considered by the Senate.

3. Academic Performance Evaluation report for the current semester was also placed on the table and approved by the Senate. Senate appreciated the general improvement on the academic performance of the students who were on academic probation/termination/warning and the efforts of the faculty in improvement of the students' performance were also appreciated. Suggestion of one of the members to make the academic report of the students, accessible to their parents online was also welcomed. It was informed to the Senate that presently the report is made available to the students online through the intranet.

4. Rescheduling of courses for 2008 and 2009 batches to include project based internship was presented by the Coordinator Academic Affairs. Prof. Khedkar, member of the CRC suggested postponing the discussion on the proposal until the discussion on the next item as the CRC had also made certain recommendations

on the implementation of project based internship in its report. The matter was decided to be discussed after the discussions on agenda item Senate/2010-11/1.04.

Senate/ 2010-11/1.04	Recommendations of the Curriculum Restructuring Committee (CRC)

Recommendations of CRC were placed before the senate for discussion, as circulated earlier in the agenda notes. Prof. Tandon, Convener, CRC presented the recommendation report. Prof. Khedkar then initiated the discussion, giving details of the report. Dr. S.S. Lamba, member of the Senate raised the objection that the number of faculty having their reservations/concerns/recommendations on the project based internship has not been mentioned in the CRC recommendations. Prof. Khedkar however said that broadly the views of most of the faculty have been addressed and discussed at length by the CRC members and have also been reflected in the CRC recommendations in item no 3 on page 22 of the agenda notes. It was further suggested by Prof. Khedkar to include the feedback of the faculty, conveyed by the Coordinator, Faculty Affairs Dr. Mukesh Kumar Roy, as Appendix D to the CRC recommendations to make it complete, if the some of the faculty members so desire. The Senate accepted the suggestion.

Due to the concern of the faculty members, the Senate reviewed its decision of project based internship taken in its 2009-10/1st meeting held on February 23, 2010. Based on the recommendations of the CRC and keeping in view the growing importance of internships and projects, the Senate unanimously approved to continue with the previous decision of the senate to implement project based internship from 2010 batch.

Discussions were held to review the implementation of project based internship for the 2008 and 2009 batch. Two options were suggested by the CRC for implementing the project based internship for these batches as given in Appendix 'C' of the CRC report on page 25 of the agenda notes. Senate had long deliberations on the proposals. Following suggestions were given for implementing and evaluating the internship –

1. To evaluate the project based internship a model like in BITS can be implemented where a team of faculty continuously evaluates the progress of the projects.

2. Members also emphasized on the continuous weekly evaluation of the projects so as to maintain the quality of projects. Some of the faculty members raised the issue of the shortage of faculty to evaluate the projects. Some of the Senate members however expressed that this should not be considered as a hurdle, since in most of the growing and new institutes, there is shortage of faculty.

3. It was also suggested by Prof. Reddy that a team of faculty members other than those involved in guiding the projects be made responsible to evaluate the projects and award the grades. However, members felt that these aspects be dealt with at the Institute level.

4. Some faculty members raised questions on facilities like CC, library, load on faculty etc. The Senate suggested that these modalities to be worked out at Institute level.

5. Dr. S.S. Lamba remarked that in most of the Institutes, a change in the curriculum is brought in for the forthcoming batches only.

6. It was also suggested by Prof. Chatterjee that faculty members can offer projects where theory and practice can be combined. Students can visit other Institutes and do some experimental work whereas the theoretical studies and analysis can be performed at the Institute level. It will also increase collaboration of faculty members with other Institutes.

   Prof. L. Pandey and Prof. Chatterjee further suggested developing or enhancing lab facilities by assigning projects which contribute to such developments. Prof. Pandey suggested that Institute can takeup big projects and its module can be offered for undergraduate students. In view of great challenges and opportunities they suggested the Institute to take up some projects on solar cells or wind mill.

7. Prof Reddy suggested having bigger groups that includes B. Tech. and post graduate students for long term projects/ large size but time bound projects. However members cautioned that B. Tech. and post graduate projects should not be the same.

8. Dr. Roy raised the issue of financial support to the project based internships. Chairperson, Senate informed the members that the Institute is already supporting B. Tech. projects upto Rs. ten thousand per project and the same can be extended to such project based internships. Senate members also suggested at this point to the faculty to write project proposals and bring financial support by submitting the projects to funding agencies.

After long deliberations on the implementation issues, the Senate resolved to approve its earlier decision of implementing project based internship for all the students of 2008 and 2009 batches with the second option suggested by the CRC to offer internal projects with the modification that approximately 10% of the batch size may be permitted to work outside the Institute in industries / R&D organizations for project based internship. The percentage may vary depending on the number of students who might have got offers to do project based internships by other organizations, since this was already in force in view of Senate's earlier decision through its 2009-10/2nd meeting held on July 10, 2010. Four Senate members, namely Dr. S.S. Lamba, Dr. Mukesh Kumar Roy, Dr. Bhupendra Gupta and Dr. M. Ravibabu recorded their dissent on the decision. Further the Senate approved the proposed changes in the curriculum as suggested by UGCS to implement for 2008 and 2009 batches.

The meeting was adjourned for the lunch at around 2.00 pm after the above discussions and decisions. Members reassembled after the lunch at 2.45 to discuss the remaining agenda items.

Batch of 2010 and future batches –

Senate approved the recommendation of CRC for implementing new curriculum for 2010 and onwards batches with following changes /suggestions –

1. Contents of Physics II to be run in II Semester will be worked out by a Committee consisting of Prof. L. Pandey, Prof. R. Chatterjee and Dr. M.K. Roy and Chairperson, Senate was authorized to approve the course contents recommended by the Committee.

2. Learning objective and expected outcome of each course be clearly spelt out. This will help understand the philosophy behind choosing course content and the related text/reference books/ material.

3. It was also suggested that the name of III Sem course "Manufacturing Processes and Materials" be renamed as "Materials and Manufacturing Processes" and Materials should be given due emphasis. Some of introductory aspects about the materials and their importance may be introduced in Physics II course, since the course has been now changed to 3 lectures + 1 Tutorial mode in place of the current 2 lectures + 1 Tutorial mode.

4. It was also suggested that efforts should be made to encourage the use of open source software in place of proprietary softwares whenever possible without compromising on the standards. Accepting the suggestion, it was decided to write in the course contents the name of the software or its equivalent / equivalent opensource, whenever available.

5. It is also suggested that if numbers of credits are not changed professional course mode can be changed from 3L to 2L+2P or 1L+3P from V semester onwards with prior approval from Chairperson, Senate.

6. It is also suggested that a proper tree structure should be made for each stream of specialization in each discipline.

7. Depending on the learning objective and expected outcome for each course, to be recommended by the CRC, the faculty members of various disciplines will frame the course contents and the same will be placed in the Senate for discussion and approval.

The course structure recommended by the CRC for 2010 batch onwards was approved by the Senate.

At this time, the Coordinator, Academic Affairs proposed to authorize Chairperson, senate to take time to time decisions to approve changes in the curriculum structure and courses as the need arises. The same may be presented in Senate for ratification. Senate approved the proposal.

Senate/ 2010-11/1.05	**Proposal of the Institute to participate as a founding member in an international consortium on 'Ubiquitous and Mobile Technology for product design and design support' with partners from PDPM IITDM Jabalpur, TU Delft, Purdue University, Vaal Institute of Technology and Columbia University – Named as World Wide Consortium on Design Services.**

Dr. Tanuja Sheory Coordinator International Affairs presented the proposal to participate as a founding member in world wide consortium of design services. Members appreciated the Institute's efforts in strengthening its international relations and in particular expressed their satisfaction on participation of the Institute in a video conferencing based course on "artifact and service innovation with ubiquitous technologies". The proposal was approved by the Senate. Prof Dikshit suggested the idea of giving a joint certificate by all participating Institute to the students successfully completing the course. He further suggested that this can be open to other Institutes also

so as to make the Institute a pioneer in providing such world class education for other Institutes as well. He also suggested to explore applications of ubiquitous technology in rural areas and offered to provide the support for field work and requirement analysis as the School of Good Governance and Policy Analysis, Bhopal has a wide area network in rural areas around Jabalpur district, as informed by him. His suggestions were welcomed by the members and the Institute would further explore implementing these ideas at the consortium level.

Senate/ 2010-11/1.06	**Proposal to open the Ph.D programme for QIP and external candidates**

The Senate deliberated on the proposal for Ph.D. Admissions under the category of External and QIP candidates and accepted the proposal with the minor modifications in the certificate from the employing organization which was placed on page 58 of the agenda notes. The word “IITM” to be read as “IIITDM”.

Senate/ 2010-11/1.07	**A Proposal for Ph.D programme in Design**

The senate deliberated on the proposal for Ph.D. prgramme in Design and accepted the proposal in principle with following modifications in the research areas. In place of “Interaction Design, Ergonomics, Product Design, Visual Communication, Animation, Art and Craft, Landscape Architecture, Environmental Design, Art & Design, Culture & Design, Design & Aesthetics, Emotion in Design, Space & Design, etc” the areas would be “Product, Space and Interaction”. It is also approved that the minimum qualification for Ph.D. in Design will be M.Des. Faculty of Design discipline will work out on the course structure and contents accordingly along with the learning objectives and the same would be brought in the next Senate meeting for discussion and approval.

Senate/ 2010-11/1.08	**Proposal for introducing specialization in master’s programme: A proposal of M.Tech. Mechnatronics**

The senate deliberated on the proposal of M.Tech. in Mechatronics and same was accepted. Senate also discussed the proposal of Dr. Gautam Dutta to start an M.Tech. programme in Computational Science and Engineering with Mechatronics as its subset. Members however did not agree with the proposal given by Dr. Gautam Dutta. Keeping in view the growing importance of the field of computational engineering, some of the members suggested considering a separate programme in this area or a related area such as Computational Biology which is also an emerging field. If the expertise is available in the Institute in these areas and the faculty brings a detailed proposal, the same would be considered by the Senate in future.

Senate/ 2010-11/1.09	**Appeal of students on suspension due to disciplinary action against them.**

The Senate deliberated on the appeal of students on suspension due to disciplinary action against them. Professor Dikshit was of the opinion that a decision on disciplinary action once taken should not be relaxed in general, as it would send wrong signal amongst the students and as a result students will keep creating the discipline. Prof. Chatterjee was of the opinion that the sentence may be relaxed keeping in view of the career of the students. Dr Lamba suggested the idea of one semester suspended sentence that amounts to allowing them to register for the courses for the next semester. During this period, a student would be under strict vigilance and in case of any misconduct, their programme would be terminated with immediate effect. Dr. Pritee Khanna suggested considering the

past performance of each individual student before taking a decision. After discussions, the Senate authorized the Chairperson senate to take appropriate decision, based on the past performance of the students. The Chairperson, Senate informed the members that she would seek the opinion of SACS (Students' Advisory Committee of the Senate) to take the decision on the matter.

Senate/ 2010-11/1.10	**Ratification of the approvals accorded by the Chairperson**

The approvals accorded by the Chairperson of senate from time to time, as detailed below were ratified by the Senate.

S.No	Subject	Approval accorded on
1.	Minutes of the meeting of UGCS of changes in curriculum for 2008 and 2009 batch	July 16, 2010
2.	Approval of syllabus for different courses run in I Sem 2010-11	Different dates
3.	Replacement of MN201 by MN201 and MN202	August 18, 2010
4.	Approval of Syllabus of ES101	August 2, 2010
5.	Proposal for new course DS542	August 27, 2010
6.	Course content of CS416	July 30, 2010
7.	Approval for adding & dropping of courses to cover backlog or for academically deficient students	August 2, 2010
8.	Proposal for new course DS615	August 3, 2010
9.	Approval for EM672b & EM672a	July 3, 2010
10.	Approval of courses for UG & PG students	June 7, 2010
11.	Academic Calendar for the year 2011	
12	Approval for running courses in summer semester 2010.	May 13, 2010

Senate/ 2010-11/1.11	**Any other item with the permission of the Chair**

The following matters were taken up with the permission of the Chairperson

Senate/ 2010-11/1.11.1. The Actg Co-ordinator Academic Affairs, Dr. Vijay Kumar Gupta, raised the issue of time given to the faculty for submission of grades after the end semester examinations. He emphasized that the 72 hours time given to the faculty is insufficient. He told that for evaluation work a faculty has to manage with practically no tutors even for classes having strength of approximately 250 or more. In view of the shortage of faculty, the Senate decided to extend the deadline of grade submission to five days (120 hours) after the date of last examination instead of existing three days (72 hours).

Senate/ 2010-11/1.11.2. A proposal for a course on "Professor English" submitted by Prof. Adhikari for PG students was placed before the senate, as per the decision of the Senate of making a course on "Professional Communication Skills" compulsory for PG students vide its meeting held on July 10, 2010. Some members expressed their opinion that it is not possible to teach a student about how to write a scientific research paper or proposal. The skill develops with experience after reading several research papers and by pursuing research. After deliberations, it was decided that preamble and content should be reframed as per the need for PG students. The Chairperson, Senate was authorized to

approve the same. It was also decided that QIP candidates be exempted from the course as they have enough experience of professional communication.

Senate/ 2010-11/1.11.3. Industrial Internship / Training for PG students. The proposal was postponed for consideration in the next Senate meeting since no details were presented.

Senate/ 2010-11/1.11.4. Dr. Dinesh Kumar Vishwakarma had placed a proposal to convert the professional course on "Application of Electromagnetics" from 3L to 1L+4P due to heavy practical nature of the course. Senate accepted the proposal.

Senate/ 2010-11/1.11.5. Another proposal submitted by Prof. Amit Ray for a course on "Industrial Product Development" for M.Des. was placed before the Senate. The proposal did not clearly indicate whether the course was an Elective in Modular Form or a full 4 credit course due to lack of some information. It was advised to reframe the course and the Chairperson, Senate was authorized to approve the proposal after modifications.

Senate/ 2010-11/1.11.6. Prof. Puneet Tandon, Chairman, Placement Cell, informed the Senate that all the 33 students who qualified the written examination (out of 52) were selected for final placements with Infosys on Saturday, 18th of December 2010, 2 students are selected in Capital IQ and 45 students have been shortlisted by the Indian Army in the first round. The Senate placed on record its appreciation on the efforts made by the Placement Cell.

Senate/ 2010-11/1.11.7. A proposal was put by the Coordinator, Academic Affairs to authorize the Chairperson, Senate to take decisions as and when necessary on matters related to academics. He expressed that although it is implicit that the Chairperson is authorized to take decisions based on the urgent need, the same may be placed on record. The decisions taken by the Chairperson would be later presented in Senate for ratification. Senate approved the proposal.

Senate/ 2010-11/1.11.8. A proposal was made to waive off GATE/CEED requirement for admission in M.Tech/M.Des. for the students having more than 8.0 CPI for the students of PDPM IIITDM Jabalpur. Senate approved the same and authorized the Chairperson, Senate to approve this waiver on case to case basis.

Senate/ 2010-11/1.11.9. A decision was taken by the Chairperson, Senate to offer admissions to foreign citizens and NRI through DASA scheme of MHRD. Senate ratified the decision of the Chairperson.

Senate/ 2010-11/1.11.10. Dr. M.K. Roy expressed his concern about the poor performance of academically weak students and he suggested providing special attention to such students in the beginning of their programme. Senate members from IIT Delhi and IIT Bombay informed about the methods followed in their Institutes. The Senate advised to bring a formal proposal for such students.

The meeting ended with a vote of thanks to the Chair.

-Sd-
Col (Retd.) P.S. Sandhu
Secretary

SENATE/2010-11/2/ANNEXURE II

PDPM

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

Manual of Procedures and Guidelines for Project Based Internship

TABLE OF CONTENTS

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.

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.

3.3 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 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.

5. 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.

6. 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.

7. 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.

8. 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.

9. 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.

10. 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	20	Project Evaluation Board
Final Review	40	Project Evaluation Board
CASE II: Externally Carried out Projects		
Interim Reviews (two in number)	20	Project Supervisor
External Evaluation Report	20	External Project Supervisor(s)
Final Review	60	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.
- 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.

PDPM

INDIAN INSTITUTE OF INFORMATION TECHNOLOGY, DESIGN & MANUFACTURING JABALPUR

CURRICULUM STRUCTURE

LEARNING OBJECTIVES AND COURSE OUTCOME

Semester I (24 Hours/week) **Credits: 22**

NS 101 Mathematics for Continuous Domain (3 L + 1T) **4**

Learning Objectives and Course Outcome: Mathematics is the back bone of the engineering. The objective of the first course on mathematics is to prepare the mathematical background for the applied courses that are to be introduced to the students in their curriculum. The course would focus on the fundamentals of calculus so that the students can effectively apply these principles to solve the problems of continuous domain.

NS 102 Physics I (2L + 1T + 2P) **4**

Learning Objectives and Course Outcome: To strengthen the basics of Mechanics and Electrodynamics with a view to develop problem formulation and solving capabilities as a precursor to advanced and more focused courses in various engineering disciplines.

IT 101 Fundamentals of Computing (2L + 3P) **4**

Learning Objectives and Course Outcome: The purpose of this course is to introduce to the students the environment of computing and programming. At the end of the course, a student should be able to use contemporary computers to write meaningful programs, execute them, observe and interpret results using contemporary tools of software development and execution environments including networked environments.

ES 101 Fundamentals of Electrical & Electronics (3L + 2/3T +2x2/3P) **5**

Learning Objectives: The learning objectives of the course include the following:

1. It is expected that student will develop clear understanding about basic concepts of charge, voltage, current, and power. Students should develop analysis skill for a given electrical circuit using various techniques.
2. Students are expected to identify and understand the working principle of “regular in use” electrical and electronics components with their specifications
3. Understand the DC and AC systems of power supply with emphasis on domestic energy consumption calculation and possible ways for saving energy
4. An exposure to Transformer, various types of Motor and their working principles and specifications
5. It is expected that students will develop applied skills through this course to perform successful experiments related to electrical and electronic circuits analysis of measurements and also develop skill to design some simple circuits

HS 101 Effective Communication (2L + 1T) **3**

Learning Objectives and Course Outcome: The purpose of this course is to make the students understand the purpose of communication and make effective communication. The course would focus on technical writing, business correspondence and preparing the students to make presentation and face interviews.

ES 102 Engineering Literacy (3P) **2**

Learning Objectives and Course Outcome: The purpose of this course is to introduce engineering to the students who have migrated from science background. The course also makes them understand the difference among science, engineering and technology as well as engineering science.

Semester II (24 Hrs/week) Credits: 22

NS 103 Mathematics for Continuous & Discrete Domain (3L +1T) **4**

Learning Objectives and Course Outcome: The objective of this course on mathematics is to unfold some of the fundamental topics of mathematics for applied field. The focus will be on solving problems of both continuous and discrete domain.

NS 104 Physics II (3L + 1T) **4**

Learning Objectives and Course Outcome: To get a feel for the inadequacy of classical mechanics for dealing with atomic world and high tech materials and to get familiarity with the prevailing quantum mechanical treatments."

DS 101 Engineering Graphics (2L + 3P) **4**

Learning Objectives: Graphics is the language of engineers. The objective of this course is to introduce students with basic principles of engineering drawing. The course aims:

1. To develop visual thinking.
2. To familiarize students with the principles of engineering hand drawing (Sketching, Projections, Sectional Views and intersection of solids)
3. To introduce the students to the standards and conventions used in technical drawings.
4. To teach the elementary use of computer drafting by using CAD software.
5. To familiarize students with the basic reading and interpreting of blue prints.

Expected Outcome:

1. Students will learn the principles of engineering drawing
2. They will learn how to read and draw engineering drawings.
3. They will learn basic projections, sectioning, and intersection of solids.

ES 103 Data Structures and Algorithms (3L + 2P) **5**

Learning Objectives and Course Outcome: The purpose of this course is to make the students aware about the usage of standard data structures and algorithms based on clear intuitions on why particular data structures or algorithms are more suitable for a given task compared to the others. Apart from exposing the students to lower level details of the data structures (such as the use of pointers to build advanced data structures in the memory), students should also be exposed to available tools and libraries (such as STL in C++ or Java packages).

HS 102 Culture & Human Values (2L + 1GD) **3**

Learning Objectives and Course Outcome: The course is expected to introduce to the students the wisdom of the philosophical texts. It is also expected that the course would improve the communication and general awareness of the students. NOTHING ABOUT CULTURE AND HUMAN VALUES?

IT 102 IT Workshop I (3P) **2**

(Matlab /Scilab 6 turns + SolidWorks / equivalent open source 6 turns)

Matlab/SciLab – Learning Objectives and Course Outcome: This course introduces various toolboxes of Matlab to the students. At the end of the course, it is expected that the students should be able to express engineering computations in a high level language.

SolidWorks /Equivalent Opensource – Learning Objectives: SolidWorks is a tool for 3D modeling. The course aims to introduce students with 2D and 3D modeling of components.

Expected Outcome:

1. Students will learn 3D CAD modeling
2. They will learn fundamentals of assembling

Semester III (24 Hrs/week) Credits: 23

NS 205 Mathematics for Discrete Domain / Mathematics III (3L + 1T) 4

Learning Objectives and Course Outcome: The objective of this course is to provide advanced background of mathematics to various engineering disciplines so as to prepare a background for some of the professional courses and to help students solve the applied engineering problems using these concepts.

ES 204 Engineering Drives and Devices (2L + 2P) 4

Learning Objectives The course is designed to give basic knowledge about electrical and mechanical systems used in daily life. The students will be introduced about the theory behind the working and constructional features of mechanical and electrical systems. This course focuses on the knowledge and functioning of mechanical devices used in combination with electrical drives to make the system efficient, effective and economical.

Expected Outcome: At the end of course students will be having fundamental and working knowledge of mechanical and electrical drives and devices which will helpful for them in daily life. Also, they can opt for more advanced courses on I.C. Engine, Vehicle Engineering, Mechatronics, etc.

HS 203 Arts and Aesthetics (2L + 2P) 4

Learning Objectives and Course Outcome: The objective of this course to introduce art and its perception to the engineering students. The course would also focus on colour, space and style.

MN 201 Materials & Manufacturing Processes (3L + 3P) 5

Learning Objective: The course would provide a platform to have the basic knowledge of materials used in engineering products. Further, it would also provide the fundamental knowledge about the technology and methodology adopted by the industry to give those materials the desired form.

Course Outcome: The students would be exposed to the characteristics of the materials to be processed along with the fundamentals of manufacturing operations. The students would also be provided a platform to perform hands on working on the materials and have a physical feel of the products designed by the methods.

IT 203 IT Workshop II (3P) (OOPs with Java OR (Matlab/Scilab 6 turns + LabView 6 turns)) OR (CATIA 6 turns + ADAMS / LabView 6 turns) **2**

OOPs with Java – Learning Objectives and Course Outcome: This course should provide a solid foundation in object oriented programming at a practical level using Java.

MatLab/SciLab – Learning Objectives and Course Outcome: The course intends to make the students well versed with scientific / technical computing environment. The course would help the students to become familiar with some of the advanced toolboxes of technical computing software so that the students are provided a practical understanding of the courses.

LabView/ Equivalent Opensource – Learning Objectives and Course Outcome: The course focuses on the terminology and concepts of LabVIEW/equivalent opensource. It will make the students familiar with virtual instruments (VIs), their principles and working. The outcome of the course would be making the students capable of writing sophisticated applications programs.

CATIA – Learning Objectives and Course Outcome: CATIA is a high level tool for advanced 3D geometric modeling, analysis and manufacturing applications. The course aims to introduce the students about the advance features of a general CAD software.

ADAMS – Learning Objectives: ADAMS is a multibody dynamics and motion analysis software for Mechanical Engineers. This course aims to make working models of mechanisms and analyze kinematics and dynamics of simple and complex mechanisms.

Expected Outcome:

At the end of course students will be able to model and analyze mechanisms and complex mechanical systems.

Semester V (21 Hours/week) Credits: 23

MS 301 Management: Concepts and Techniques (3L) **4**

Learning Objectives and Course Outcome: This course is designed to train the undergraduate students regarding the basic principles of management used in the corporate environment. To make the students understand comprehensively the theory is supplemented with the discussions on many real life problems in the form of case-studies.

DS 302 Engineering Design (2L + 4P) **5**

Learning Objectives and Course Outcome: The course is meant to nurture creativity, innovation and ideas. The objective of the course is to recognize critical elements in creative domain of engineering design and product / process development strategy. The course also aims to make the students understand that with rapid shrinking of the world with technologies spreading freely without borders and people demands getting more complex, the understanding of a problem can be understood holistically through extensive teamwork only; and the role of a designer is to act as a bridge among these diverse fields in such a team. The course would also include detailed designing of a product in resonance with the customer requirements.

Semester VI (21 Hours/week) Credits: 22

MN 303 Fabrication Project (6P) **4**

Learning Objectives and Course Outcome: This course is the successor to the course DS 302 (Engineering Design). Here, the students are expected to properly fabricate the already designed product so that it have the proper finishing and packaging and is ready to be launched into the market. The end output is a functional model.

Semester VII Credits: 18

PR 401 Project Semester S / X **16**

Learning Objectives and Course Outcome: The project based internship facilitates students to be exposed to the best practices, team work, integrated solution methodology and problem oriented learning. The project based learning would expose the students to syntheses of engineering ideas, tools and solutions, cutting across orthodox and rigid classification of disciplines.

CS/ EC / ME 499 Professional Online Course I: (Through NPTeL) S/X **2**

Learning Objectives and Course Outcome: In this course the students have to do one course on-line through NPTeL from the list of courses approved by Senate. The course intends to nurture the culture of self-learning and use of IT tools in technical education among students.

Submitted to the BOG

A proposal for

Ph. D in DESIGN

PDPM
INDIAN INSTITUTE OF INFORMATION TECHNOLOGY, DESIGN & MANUFACTURING, JABALPUR

PDPM
INDIAN INSTITUTE OF INFORMATION TECHNOLOGY, DESIGN & MANUFACTURING, JABALPUR

A PROPOSAL FOR PH.D IN DESIGN

1. Objective:

The conventional educational system allows individual to excel in a limited field. However, it does not prepare a student to face the challenges beyond a prescribed path. In the recent years the conventional research fields are rapidly disappearing and the need of interdisciplinary research, overlapping various fields of professions, are expanding the knowledge It is obvious; mind cannot be restricted to a limited space. The paradigms of living and non-living beings create a world of inquisitiveness. The source of such knowledge is the foundation of all design inventions. Creative person thinks differently, which emerges out of such freedom of liberal mind. The intellectual growth through liberal education would fulfill the desire of satisfaction qualitatively rather than quantitatively. Innovation is the key to future generation and prosperity of a nation.

Unfortunately, the present global economic policy increasingly forcing a new parameter in the value system, a new life style is primarily based on quantitative measurements rather than qualitative judgment. Such policy would soon exhaust the flow of creative thinking. The need of the hour is to create a balanced curriculum synthesizing between ‘divergent thinking’ and ‘convergent thinking’. The proposed Ph. D research programme based on the above philosophy looks forward in developing a hub of interdisciplinary research environment. It is expected such research curriculum would generate an ideal liberal research environment breaking the conventional fields to creating a new horizon.

Design is an integral part of the IIITDM Jabalpur since its inception. The fields of design integrate various other subjects, such as art and aesthetics, humanities and social sciences, cognitive science, performing arts along with science and technology. The applications of various science and technology based knowledge emerges out of design. IIITDM Jabalpur is located in a state that is rich with traditional handicrafts, art and colonial architecture, folk and classical music and is the only IT institution in the country where Design is going to establish its benchmark through integration of such interdisciplinary field of liberal studies with engineering

curriculum. Such environment has given an exciting challenging opportunity to explore rare fields of research and professions to grow with. There are large numbers of Information Technology Institutes operating in the country. However, having an independent design discipline in an Information Technology institution is unparallel in the country. The programme would broadly like to cover the following fields of research areas- Interaction Design, Ergonomics, Product Design, Visual Communication, Animation, Art and Craft, Landscape Architecture, Environmental Design, Art & Design, Culture & Design, Design & Aesthetics, Emotion in Design, Space & Design, etc. The research areas would certainly attract large number of scholars from wide range of professions to create a unique hub of liberal research environment. Consolidation information of the above areas would create a unique scholarly environment and professionals.

Hence, the discipline proposes to introduce Ph.D. programme in Design. The programme envisages developing adequate facility in term of literature resources and studio facility to support the new programme.

2. Proposed Ph. D. Research Areas:

(a) Research in Design

The design programme would concentrate on developing a knowledge based design professionals who would become the problem solvers, and who can effectively use different design methodology. They would develop their innovative and aesthetic sensibilities into making a coherent and appropriate research. The students would be encouraged to solve socially relevant problems.

The Design Discipline would focus on various fields of application of design in the field of science and technology, such as- 'Product, Space and Interaction' (e.g. Interactive Design (HCI, UI, etc.), Ergonomics, Product Design, Media Studies, Color in Design, Visual Communication, Environmental Design and Landscaping, Design & Aesthetics, Art & Society, Crafts Design, etc.) The Design Discipline at IIITDM Jabalpur would have the unique opportunity to take leadership in the above fields of research. Having advantage of Computer Science & Engineering in the Institute the area of HCI & UI, Experiential Design, Usability of products, and Application of Design in Analysis and control of human error, Agricultural Equipment and Process Design etc. would be an appropriate area of research. As mentioned

earlier the discipline with its unique quality of research specialization would create an environment to synthesize art, science, and technology in the field of design. No other Information Technology institution in India has such unique environment. Presently in Madhya Pradesh IIITDM Jabalpur is the only educational institute where design education is pursued.

Employment Opportunity:

The design discipline would create a healthy balance between theoretical research as well as experimentation research. A synthesis of both would certainly create a strong intellectual base. Due to the strong interdisciplinary nature of research at IIITDM, the students would have much wider range of employment opportunity. They would have opportunity in teaching, research organizations, advertising agencies, film industries, field of visual communication, and in design companies apart from consultancy. The proposed fields would increase wide range of research and employment opportunities around the country. The Design Discipline would like to encourage research in the area of handicraft, with specific focus on hand tool and work station design, occupational health and safety, injury prediction, and impact of environment of the craftsperson's, along with visual merchandizing aspects of craft products, which is rich in the state of M.P.

Conclusion

Following P.G. level courses are presently proposed in the Ph.D. Programme in Design area and as and when the program is approved, more courses could be offered. As explained earlier the research work in Art and Design would create a new path in interdisciplinary research. Hence, by introducing a Ph.D. program in Design, **drawing from the disciplines of Art, Science, and Technology**, the Institute and the discipline would be benefited and be able to establish a leadership and unique academic environment in Design that is not available in the country. The uniqueness of such a design programme would be that it would be a unique blend of different elements from the domain of Science, Technology and Arts. IIITDM based on the strength of Information Technology, would become the hub of archival research for the entire Central India that even today holds large amount of traditional cultural values.

The Proposed Courses in Ph. D:

Each student has to register for minimum of four courses in each semester. It is proposed to have one compulsory course (Research Methodology & Technical Writing) for all the design students and other elective courses based on their interest. The Coordinator for the Ph. D Programme would recommend the courses to the students in consultation with the design faculty group.

Compulsory

1. COURSE TITLE: RESEARCH METHODOLOGY & TECHNICAL WRITING

Objective: To familiarize students with variety of methodological approach in criticism, analysis and technical writing. In order to write research paper and dissertation every student needs to learn about the methodology. The course proposes to develop visual skills and analytical skills in writing about various forms of art in using concepts and terminology. It also would enable research student to exercise skills in observation of various forms of design and visual media.

Course Content: The methodology of criticism is base on some of the following authors- John Dewey (Criticism and Perception), Barkan, Fidman's, Jack Hobbs, and Solomn's Phenomenological Model of Criticism, and Ducasse's *Language of Feeling.*
The critical analysis would be based on Art and Perception, Principles of Style, Styles in 2-dimension and 3-dimension visual art. Technical writing would involve in teaching some of the basic internationally recognized journal manuals, such as- American Psychology Journal (APA), The Chicago University Journal.

Elective Courses:

1. COURSE TITLE: DESIGN THEORY

COURSE CONTENT:

Objective: The course intends to discuss on the following topics along with related studio activities-
Course Contents: Design Philosophy, History of Design, Art, Design & Society, Form, Space & Texture, 2-D & 3-D Form Analysis in Product Design and its architecture, Theory of Color, Color Aesthetics, Introduction to Computer Art, Human Experience in Design, Indian Tradition & Products, Environmental Design.
Studio- The course intends to build an over all understanding in the following areas-
Form, Space & Texture, 2-D and 3-D Form Analysis, Color and Texture in 2-D & 3-D surface, Color Aesthetics, Computer and composition, Product Analysis and Ergonomics, Environmental Design Model

2. COURSE TITLE: CREATIVE VISUALIZATION

Objective: Designers require strengthening their creative perception through various forms of art, science and technology. The course intends to develop overall perception and understanding of the following-
Course Contents: What is Creativity? Design & Performing Art; Art & Perception; Principles of Style; Style in Art; Space in Art; Art, Design & Performing Art, Style in 3-D work, Style in

Architecture, Graphic Art; Film & Photography; Typography; Methodology of Criticism & Appreciation.

(B) The course intends to build an over all understanding of the above areas with the help of short workshops, training, field trips, and projects on- photography, filmmaking, stage-craft, scriptwriting, editing, typography and visiting relevant sites.
Studio: Related Studio Projects

2. COURSE TITLE: Product Design
Objective: The course intends to discuss the methodology of product design and development. The focus would lie in making an attempt to make a perfect match between the product requirement and deliverables.
Course Contents: History of Product Development, Product Development Process, Product Planning, Assessing Customer needs, Product Specifications & Functions, Concept Generation, Concept Evaluation, Embodiment Design, Product Portfolio, Product Architecture, Industrial Design, Detailed Design, Design for Manufacture, and Prototyping.

3. COURSE TITLE: ART: A MEDIUM OF COMMUNICATION

Objective: Medium of Communication has drastically changed through ages. The course intends to develop understanding of communication in various forms.
Course Contents: Pre-historic Art; Traditional Art as Medium of Communication- Religious Art, Buddhist Art, Christian Art, and Hindu Art; Critical analysis of the following theories/articles- Plato's 'Art as Imitation'; Aristotle's 'Theory on Art'; Leo Tolstoy's Theory of Art and 'Art as the Communication of Feeling'; David Hume's 'Of the Standard of Taste'; Susanne Langer's 'Art as Symbolic Expression: From Feeling and Form'; Arthur Danto's, 'The Art World'; POP Art and Comic Art; Art as Language of Expression in 2-D and 3-D media
Studio: Relevant 2-D and 3-D design Projects

4. COURSE TITLE: ART, DESIGN AND SOCIETY
Objective: The field of design is closely related to society. The application of design is directly related to societal need. The course intends to develop the understanding of societal fabric, need and its future based on various social concepts and theory.
Course Content: Art and Society, Primitive Design & Social Relevance, Traditional Craft and Modern Mass Produced Design, Modern Design Concepts & Society, Changing Society and Design, Globalization and the new Emerging Design Concepts, Indian Society and Design Concepts
Studio: relevant fieldwork

5. COURSE TITLE: INTERACTIVE DESIGN

COURSE CONTENT
Objective: Based on human behaviour of 'interaction' the modern communication has understood the need of digital interaction as an important field of studies. The revolution in digital media has given enormous potential in distance communication in absence of direct human interaction. Interaction Design is a major field of studies in Visual Communication. It involves HCI, GUI, etc that has become one of the most attractive fields of professions.

Course Content: What is Interactiveness, Define Human Interaction, Interaction of Social Living beings, Traditional Societal Interaction and Modern Perception, What Does Interaction Mean?, Human- Computer Interaction, What is Interaction Design?

Studio: Relevant projects

References:

Cooper, A., 1995. *About Face: The Essentials of User Interface Design*. Foster City, CA: IDG Books.

Cooper Interaction Design, 1999. Position Posting: Interaction Designer.

Denning, P., D. Comer, D. Gries, M. Mulder, A. Tucker, A. Turner, P. Young, 1989. "Computing as a Discipline, *Communications of the ACM* , 32, 1, pp. 9-23.

Dix, A., J. Finlay, G. Abowd, R. Beale, 1998. *Human-Computer Interaction*, second edition. New York: Prentice Hall. A searchable version is available online.

Laurel, B., ed., 1990. *The Art of Human-Computer Interface Design*. Reading, MA: Addison-Wesley.

Laurel, B., 1992. *Computers as Theater*. Reading, MA: Addison-Wesley.

Preece, J., Y. Rogers, H. Sharp, D. Benyon, S. Holland, T. Carey, 1994. *Human-Computer Interaction*. Workingham, U.K: Addison-Wesley.

6. COURSE TITLE: ERGONOMICS FOR INDUSTRIAL DESIGN

COURSE CONTENT

Objective: Man-machine interaction is one of the most important components in design profession. Is expected every students needs to taken ergonomics course.

A short History of Ergonomics; Ergonomics/Human Factors fundamentals; Design communication and ergonomics; User-friendly man-machine-environment system; Capabilities and limitations of people in terms of physical (body structure, growth, anthropometry, biomechanics, movement), physiological (allowable limits and safety factors) and psycho-sociological (behaviour, cognitive aspects, information processing and perception issues) design interaction; User-compatible industrial design principles, methods and criteria; Design development and role of ergonomics for consumer products, hand tools, furniture, workplace and component layout; Considerations for people with functional limitations and special needs for inclusive and exclusive design aspects; Design evaluation techniques and assessment methods, and aspects of Usability in Product Design.

Reference/ Recommended Books:

Chakrabarti, D: Indian Anthropometric Dimensions for ergonomic design practice, National Institute of Design, Ahmedabad, 1997

Christopher P Nemeth: Human Factors Methods for Design, Making Systems Human-centered, CRS Press LLC, 2004

Dul, J. and Weerdmeester, B: Ergonomics for beginners a quick reference guide, Taylor & Francis, 1993.

G. Salvendy, (edit), Handbook of Human Factors and ergonomics, John Wiley & Sons, Inc., 1997

P. W. Jordan and W. S. Green (edit): Human Factors in Product Design- current practice and future trends, Taylor Francis, London, 1999.

8. Other topics: MAY BE DEVELOPED AS AND WHEN REQUIRED

Craft, Creativity and Post-modernism
Communication through Form
Contemporary Trends in Theater, Film and Art
Animation and Sequential Art
Colonial Architecture in Indian Context
Tribal Art and Socio-anthropological Relevance
Primitive Art, Symbolism and Design
Traditional Handicraft- Creativity, Material and Techniques
Traditional Design (handicraft) and Modern Design a Comparative Study

Traditional Design Concept, Material, Technique and Manufacturing Processes
Interactive Design & Communication
Environmental Design and Landscaping
Folk Performing Art (folk music, folk dance, folk costume, folk play/ drama etc)
Special Studies in Man, Machine and Space
Design Ergonomics
Ergonomics of job/task design
Experiential design
Product usability
Injury prediction in industry
Ergonomics in manufacturing
Quantitative research methodology: design reliability, validating design
Ergonomics in medical equipment design
Ergonomics in defense, forensic science and national security
Elementary scientific principles in design

ANNEXURE-V

PDPM
INDIAN INSTITUTE OF INFORMATION TECHNOLOGY DESIGN AND MANUFACTURING JABALPUR

To

The Chairperson Senate,
PDPM IIITDM Jabalpur.

Dated: 12th March 2011.

Dear Prof. Ojha,

We would like to register our protest on the way faculty members of this institute are show disrespect by the registrar. Few faculty members had written an email on the faculty mailing list bringing to your notice the issue of concern but your silence on the issue confirms that you are not concerned with the feeling of the faculty members and hence you have fully supported Registrar on the issue as no apology has been tendered by the registrar to the faculty.

The working of chairperson senate and registrar of the institute is highly condemnable and hence we have decided to put our "Note of Dissent" on the working of chairperson senate and registrar and as a mark of protest we will not attend the senate meeting to be held on 12th March 2011.

'A' We would like to remark that we have our views on the minutes of the senate meeting held on 24th Dec 2010 as we will not be present we would like that agenda to be postponed to the next senate meeting.

The disrespect shown by the registrar and supported by you will be reported to the concerned appropriate authority in due course of time.

Regards,

Subir Singh Lamba — Bhupendra Gupta — M. Ravi Babu.

(Subir Singh Lamba) (Bhupendra Gupta) (M. Ravi Babu)

1. Please take the views of the members on the minutes of the meeting held on 24th December, 2010.
2. Please state if the views are already conveyed to the secretary.

Reg. Sec. Officer 12-3-2011

Subject: Letter dated 12-03-2011 Addressed to the Chairperson-Senate Reg.
From: "Col (Retd.) P.S.Sandhu" <registrar@iiitdmj.ac.in>
Date: Sat, March 12, 2011 10:57 am
To: subirs@iiitdmj.ac.in
Cc: director@iiitdmj.ac.in
Priority: Normal
Options: View Full Header | View Printable Version | Download this as a file| Add to Addressbook | View Message details

Dear Dr. S.S. Lamba,

Ref. your letter dated 12-03-2011 addressed to the Chairperson-Senate, your comments on the minutes of the senate meeting held on 24th Dec.,2010 are awaited by the undersigned for further necessary action.

With best wishes,

[Col (Retd.) P. S. Sandhu]
Registrar/ Secretary-Senate
PDPM IIITDM,
Jabalpur

Subject: Letter dated 12-03-2011 Addressed to the Chairperson-Senate Reg.
From: "Col (Retd.) P.S.Sandhu" <registrar@iiitdmj.ac.in>
Date: Sat, March 12, 2011 10:59 am
To: bhupen@iiitdmj.ac.in
Cc: director@iiitdmj.ac.in
Priority: Normal
Options: View Full Header | View Printable Version | Download this as a file| Add to Addressbook | View Message details

Dear Dr. Bhupendra Gupta,

Ref. your letter dated 12-03-2011 addressed to the Chairperson-Senate, your comments on the minutes of the senate meeting held on 24th Dec.,2010 are awaited by the undersigned for further necessary action.

With best wishes,

[Col (Retd.) P. S. Sandhu]
Registrar/ Secretary-Senate
PDPM IIITDM,
Jabalpur

Subject: Letter dated 12-03-2011 Addressed to the Chairperson-Senate Reg.
From: "Col (Retd.) P.S.Sandhu" <registrar@iiitdmj.ac.in>
Date: Sat, March 12, 2011 11:01 am
To: mravi@iiitdmj.ac.in
Cc: director@iiitdmj.ac.in
Priority: Normal
Options: View Full Header | View Printable Version | Download this as a file| Add to Addressbook | View Message details

Dear Dr. M. Ravi Babu,

Ref. your letter dated 12-03-2011 addressed to the Chairperson-Senate, your comments on the minutes of the senate meeting held on 24th Dec.,2010 are awaited by the undersigned for further necessary action.

With best wishes,

[Col (Retd.) P. S. Sandhu]
Registrar/ Secretary-Senate
PDPM IIITDM,
Jabalpur