REVISED SYLLABUS OF FINAL YEAR PRODUCT DESIGN.

PD173629   **DISSERTATION II**

TEACHING SCHEME: Total contact period per week – lectures 2 + studio 6 = 8.

EXAMINATION SCHEME:

Paper: Nil

Oral: 50

Sessional Assessment: 50(Internal).

Aim: The dissertation II shall help the students to define the graduation project synopsis based on the research undertaken by the students in dissertation I. In case of Live brief identified by the student, the brief shall be reviewed to ensure it qualifies for the scale of the graduation project and needful research should be undertaken by the respective student.

Objectives:

To enable the student to define with innovative response the aim, objective, scope and limitation of the project in the form of a well articulated synopsis to define the graduation project.

Course Content:

- Data collection, analysis through surveys, reports or market research and presenting the same using graphical, numerical or descriptive methods.
- Report shall consist of quantitative (parametric) and qualitative data, drawings etc.
- The research shall synthesis into a well defined aim, objective, scope and limitation of the project in the form of a well articulated synopsis to define the graduation project.

Assignments:

1. Students shall submit a copy of the report duly signed by the subject teacher.
2. The report shall consist of three main parts.

    a. Initial Pages in the following sequence:

    1. Title page

    2. Acknowledgement.

    3. Table of content.

    b. Main body of the report.

    1. Introduction.

    2. Methodology.

    3. Literature research.

    4. User and market research.

    5 Global solutions Research.

    6. Data analysis and findings.

    7. Conclusions and synopsis.

    8. Bibliography.

Formatting of the report.

    a. The report shall be presented in A4 landscape.

    b. The fond shall be either Calibri or Bookman old style or Arial.

    c. Chapter titles …. 18 point upper case bold .Sub heading 16 point title case bold, text 14 point sentence case. Line spacing shall be 1.5lines.

PD173630   DESIGN MANAGEMENT.

TEACHING SCHEME: Total contact period per week – lectures 2 + Studio 6 = 8

EXAMINATION SCHEME:

Paper:Nil

Oral: 50

Sessional Assessment: 50(Internal).

Aim: Introduction to the requirement of strategy and planning in future growth potential of product design and development.

To expose the students to the particulars of Professional Practice of Design.

Introduction to design management and process of design patents and registrations.

Objectives:

To make students aware about design management as practice and profession.

To make students aware about the professional bodies, organization.

To make students aware about the professional ethics, role and responsibilities.

Course Contents:

- Product Planning for the future
- Product Life Cycle management
- Planning for redesign
- Strategy for product differentiation and identity.
- Professional bodies, organization.. Their vision, mission, aims and objectives.
- Professional ethics, role and responsibilities.
- How to set up an independent office, method of charging, preparing project schedules, etc.
- Study of Intellectual property Rights and design registration procedures.

Assignments:

A seminar paper presentation.

Recommended readings:

Kathryn Best, The Fundamentals of Design Management, AVA Publishing, 2010

Brigitte Borja De Mozota, Design Management: Using Design to Build Brand Value and Corporate Innovation, Allworth Press, 2004

Ted Crawford, AIGA Professional Practices in Graphic Design, Allworth Press, 2008

Shan Preddy, How to Run a Successful Design Business: The New Professional Practice, Gower Publishing, Ltd., 2011

Kenneth B Khan, Product Planning Essentials, M E Sharpe Inc, 2011

John Stark; Product Lifecycle Management: 21st Century Paradigm for Product Realisation, Springer, 2011

Craig M. Vogel, Jonathan Cagan; Creating Breakthrough Products: Innovation from Product Planning Program Approval, FT Press, 2001

David L. Rainey; Product Innovation: Leading Change through Integrated Product Development, Cambridge University Press, 2011

Cradle to Cradle_William McDonoug

PD 173631	PRODUCT COSTING AND ESTIMATION.

TEACHING SCHEME: Total contact period per week – lectures 2 + Studio 2 = 4
EXAMINATION SCHEME:
Paper: Nil
Oral: Nil
Sessional Assessment: 50(Internal).

Aim: This course enables the students to understand the concept and importance of costing ad estimation from the perspective of a simple product design and development.

Objectives:
To enable the student to understand the breakdown of a simple product like pen into components, the implication of these components on the costing of the end product from various perspective like design material & manufacturing ; Vendor; Mass manufacturing ; assembly ; market etc.

Course Contents:
- Identification of a simple product range of a brand within an economic segment.
- Breaking down of the product into components to understand the design; manufacturing decisions that influence Cost.
- Introduction to key factors responsible for the costing of a product.
- Preparation of cost sheets for process and sub processes to compile the data collected to estimate the cost.
- Introduction to the pricing of the product.(Market ,Brand, Brand strategy, Product positioning)
- The students shall be made to understand through analysis of an existing product the implications of design decisions on the cost of the same.
- The subject understanding shall be assessed based on the estimation of the cost prepared by the student of a product either designed by them or identified by them.

Assignments:
The submission of the assignments shall be in the report format.

Reading List
Product Costing: Concepts and Applications
Book by Arthur H. Adelberg, Frank J. Fabozzi, Jacqueline A. Burke, and Ralph S. Polimeni
Cost and Price: Or, the Product and the Market (English, Paperback, Isaiah Skeels)
Product Cost Estimating and Pricing: A Computerized Approach by Michael R. Tyran (Author)
The Lean Design Guidebook: Everything Your Product Development Team Needs to Slash Manufacturing Cost by Ronald Mascitelli (Author)

PD173632   DESIGN PROJECT V

TEACHING SCHEME: Total contact period per week – lectures 3 + studio11 = 14
EXAMINATION SCHEME:
Paper: Nil.
Oral: 50.
Sessional Assessment: 100(Internal)50(External).

Aim:
This course gives the students an opportunity to explore specific area of design application with users of different needs and serve the user to improve their quality of life.

Objectives:
To make the students aware about the principles of Universal Design.
To enable the students to understand the special needs of the differently -able to enable them design and develop solution with empathy.

Course Content:
1. Introduction to the design intervention in the human realm which add value and quality to the life.
2. Identifying a user or a group of users in accessible environments.
3. Documentation of the user/users to understand the skills, aspirations and challenges in different environments.
4. Presentation with constructive analysis to identify area of potential intervention.
5. A focused detail research, documentation of the identified need.
6. An expert perspective like a doctor, trainer, care takers etc.
7. Research of the global solutions.
8. Synthesizing and prioritizing the research observations leading to design brief.
9. Formulating the design brief.
10. Introducing students to critical creative thinking tools.
11. Ideation -- concept generation and explorations with quick explanatory models.
12. Finalization of the concept with design development and detailing.
13. Prototyping of 3D models.
14. Evaluation of new concepts
15. Hand and computer Renderings and finished model of the final design solution.
16. User validation.

Assignments:
• User research documentation & presentation (35%)
• Analysis & formulation of design brief (25%)
• Ideation & exploration -- sketches & study models (25%)
• Final design solution -- product detailing, rendering & finished models/prototype (10%).
• User validation and design realization (5%).

PD 173633   PORTFOLIO MAKING

TEACHING SCHEME: Total contact period per week – lectures 1 + Studio 3= 4
EXAMINATION SCHEME:
Paper:Nil
Oral: Nil
Sessional Assessment: 50(Internal).

Aim: This course enables the students to compile all the project and research works as a Portfolio to be shown both internally and externally.

Objectives:
To enable the students to compile all the work and communicate / present work in a creative way.

Course Contents:
• Students need to compile all their work in the form of a portfolio both as a hard copy and a soft copy (on CD). Each course should also carry the name of the guide and the names of other students in case of group assignments. The copyrights for all the designs and work done during the academic years shall belong to the institute.
• The portfolio will be required to be presented for applying for Industrial Training.

Assignments:
The portfolio prepared shall be submitted as soft copy.

PD 173634 - A   INDUSTRIAL TRAINING. (Training)
PD !73634 – B   INDUSTRIAL TRAINING (Assessment).

TEACHING SCHEME: Total contact period per week – lectures 1 + studio 1 =2 (30 Hours.)
EXAMINATION SCHEME:
Paper: Nil
Oral: 75
Sessional Assessment: 75(Internal).

SEMESTER VII.. REPORTED/NOT REPORTED AND SEMESTER VIII ASSESSMENT.

Aim: The aim of introducing a period of 80 days of Industrial training for the students is to enable them undergo practical training to gain exposure of the Professional Practice and get hands on experience.

Objectives: It shall give the students the first hand experience of dealing with the live projects of various typologies, domain, Genres.
The students should be able to learn and understand about project management, resource management and execution challenges.
This rich experience is expected to enhance the student's ability to think comprehensively and prepare them for undertaking the graduation project.

Course Content:
- The period for the Industrial /Practical Training will commence in the seventh semester of the fourth year immediately after the completion of the 8 weeks of the conduction of the courses of the seventh semester and will continue till the beginning of the eight semester.
- The students are expected to work with a firm/industry/organization where Product design and its related practice are being carried out. The student shall work under the guidance of a professional who has an experience of working in the respective field of product design of not less than five years.
- The student (If needed in consultation with faculty member..Training and Placement.) will decide very carefully and meticulously about their placement as they are expected to learn best ethics in Professional Practice and produce quality work.
- The total duration of the training will be minimum of 17 working weeks/ 80 working days excluding the holidays.
- The evaluation of the work done during the Industrial/Professional Training shall be evaluated at the end of eight Semester of the fourth year.

Submissions:

- The Students shall prepare an exhaustive Training report documenting the work done in the respective offices/firms/industry/organization week by week which will cover detailed records of the work done in the office, site or field research report, interviews or data collected, interaction with principal Designer, vendors or clients etc.The report shall be duly signed by the Principal Designer with the seal of the organization.
- The work certificate on the official letterhead of the respective office clearly mentioning the duration and students performance duly signed by the Principal Designer.
- The log book issued by the institute shall be filled weekly and duly signed by the Principal Designer.
- The student shall produce the above mentioned training report (digital or printed), work certificate and log book at the time of Viva Voce examination. She/he shall also produce the drawings done by him/her with the permission of the employer to indicate the kind of work he/she has carried out.

SESSIONAL ASSESSMENT AND VIVA VOCE….. The sessional and viva voce assessment shall be done jointly by the internal and external examiner and the allocation of the marks shall be as stipulated in the syllabus.

PD173635 GRADUATION PROJECT

TEACHING SCHEME: Total contact period per week – lectures 1+ studio 3 = 4
EXAMINATION SCHEME:
Paper: Nil
Oral: 100
Sessional Assessment: 250(Internal) 150(External).
Types of Graduation projects:
1. Graduation project based on synopsis formulated in Dissertation.
2. Graduation project based on a proposal of a commercial or nonprofit organization.(live brief)

Aim: This course is with the intent of exposing and providing an opportunity to the students to extend the findings of the research carried under the subject dissertation or under the guidance of the firm/industry offering live brief to the design project and execute a complete product design process with holistic approach including domain understanding, user research, market research, existing product research, design brief and design demonstration.

Objectives:
To enable students undertake a product design and development process independently. She/he should be able to demonstrate Process, knowledge and skills acquired in the previous years of academic learning.

Course outline:
The Graduation Project shall consist of design research, synthesis and design demonstration through the self initiated process demonstrating all the knowledge and skills learned in the previous academic years.

Submission work:
The sessional work for the graduation project shall consist of the
A. Design research report.
B. Log book duly signed by the guides.
C. The presentation of the research on A3 size sheets, ideations sheets, final product renders and technical drawings.
D. Study models, proof of concept and prototypes.

Graduation project Report guidelines:

Students shall submit a copy of the report duly signed by the guide, Head of the department and Principal.

The report shall consist of three main parts.

a. Initial Pages in the following sequence:

1. Title page.
2. Certificate
3. Acknowledgements.
4. Table of content.

b. Main body of the report.

5. Introduction.
6. Methodology.
7. Literature research.
8. User and market research.
9. Global solution Research.
10. Data analysis and findings.
11. Synthesizing and prioritizing the research observations leading to design brief.
12. Formulating the design brief.
13. Introducing students to critical creative thinking tools.
14. Ideation -- concept generation and explorations with quick explanatory models.
15. Finalization of the concept with design development and detailing.
16. Prototyping of 3D models.
17. Evaluation of new concepts
18. Hand and computer Renderings and finished model of the final design solution.
19. Conclusions and synopsis.
20. Bibliography.

Formatting of the report.

a. The report shall be presented in A4 landscape.
b. The fond shall be either Calibri or Bookman old style or Arial.
c. Chapter titles …. 18 point upper case bold. , Sub heading 16 point title case bold, text 14 point sentence case. Line spacing shall be 1.5lines.
d. Report shall be types on one side of the page.
e. Black binding with golden embossing.
f. Standard convention for giving references, writing bibliography, annotating figures /tables shall be followed.

SESSIONAL ASSESSMENT:

1. The internal assessment of the graduation project shall be carried out stage wise as decided by the individual institute.

2. The final assessment in the examination shall be done by both the Internal and external Examiner/s in which the student shall display his work.

3. The individual college shall make the guides available specializing in the various disciplines who will make themselves available to the students.

4. The academicians or professional guiding the students must possess minimum of five years of teaching or professional experience.

Recommended Reading:

All the books relevant for the research and synthesis of the graduation project work.