

Courses of Study

Detailed Syllabus

Master of Design

Department of Industrial Design
School of Planning and Architecture, New Delhi

2016

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PREAMBLE

The Industrial Design programme at SPA started in 1992 when India was on the threshold of profound transformations. What began as an essentially economic initiative has, in a short span of a few years, become a palpable paradigm shift in the perceptions and beliefs of a major segment of the Indian consciousness. This has led to far reaching changes in the Indian industry and as a consequence the role of Design has come in for redefinition.

Whence earlier, before the industry was content to be inward looking, now it is called upon to be globally competitive. The manufacturer in India developing his product indigenously has to compete suddenly with products that have succeeded amidst international competition. Products that are of the highest quality, characterised by the use of the latest technology, a high quality of manufacture, and by what is of direct relevance to the profession of design, a high quality of conception and design.

While product technology and manufacturing technology, falling under the generic term 'know how' under the purview of the discipline of Engineering, have access to a very large base of trained manpower, Design suffers from a lack of an adequate number of practicing professionals. There is thus a crying need for institutions to create professional designers.

At present there are a number of institutes in the country offering programmes in industrial design. The directions that these institutions have taken over the years have focused on Engineering industries, small-scale sector and craft development. There is thus the component of a large range of consumer products that are cultural products, reflecting the lifestyles and aspirations of a large section of the population, which have to be addressed by an educational initiative in Design.

Initially the Industrial Design course at SPA was started for Architects, as during that time the complexion of the architectural programme had changed. Architects were more involved in interior design and house hold products. However, formalized education in this area had

not yet become part of the larger philosophy of architectural education.

Thus, there was a need for professional inputs that could look at the product component of buildings with an underlying industrialized approach. In the year 2010, the Department of Industrial design at SPA has opened its admission to students from other fields apart from Architects. It stands as a recognized department offering the best of Industrial Design education to its students.

The Programme

The idea of the course in Industrial design, at the Master's level, dates back to the year 1985. Subsequently various activities were undertaken at the School in the area of Industrial Design, namely;

Proposal of Design Activities; the Masters Programme in Industrial Design was included in the programme of Action, approved by the school for the plan period 1987-92.

Seminar on Design Education; Participants were constituted as a working group with experts from the National Institute of Design, Ahmedabad and the Industrial Design Centre, IIT, Bombay. The working group met on March 25-27th, 1987 and submitted a paper encouraging the setting up of the Industrial Design Programme and commended the schools thinking of including Industrial design as part of its multidimensional growth plan in the field of Design.

Electives: Electives in Industrial Design and related areas were offered in the B. Arch Course in a Department of Architecture.

Indo-Italian Seminar; A seminar on the future of Industrial Design called 'Quality through Industrial Process', was organized with the active collaboration of the Italian Embassy, New Delhi, in Nov.1990. The seminar was attended by famous Italian and Indian designers and design developers.

Industrial Design at the SPA

Locating the programme in the SPA has a number of advantages. The SPA has been a deemed university since 1919 and at present it is an institute of National Importance that has continuously responded to the design needs of the country.

Furthermore, a new programme in an institution that already has a strong design culture has been a tremendous advantage. In such an environment, extending the scope of architecture to encompass industrial design activities has been viable and desirable. The School being in Delhi, offers an excellent geographical location for the programme. The industrial belt around Delhi has shown significant growth in the past few years and in such a location the programme not only benefits from industries but also has been able to influence them. Furthermore, it may be noted that the northern belt is very innovative and has accepted such a profession easily. Thus, the location of this programme in Delhi, particularly at the SPA has significant advantages.

Focus

a. Background

From its antecedents in the Bauhaus upto the early 80's the profession of industrial design has been characterised by a preoccupation with the manufacturer and his industrial processes. The profession of Design in Britain seemed to best exemplify this fact. The important designers of the 60's and early 70's were by and large people with engineering backgrounds. This fact has to be seen in the context of an industry not yet sufficiently oriented towards change - and hence employing very few specialists in technical fields. This perception was reflected in education too, The National Institute of Design was conceived at a time when there was a complete absence of engineers or other technical personnel working in a majority of factories. Hence the course was developed to stress technical competence in the designer. Technological evolution and the phenomenon of change demanded by the market saw increasing collaborations with foreign companies. This influenced the companies to

employ more technical personnel. As a result the situation today is one where industrial competence in technical matters is commendable. The designer is then asked to contribute in a specific way in product development.

We have a situation in India quite similar to the one abroad, where the role of the designer is specific. This implies that once the technological knowhow is established, the designer is called upon to develop this technological tool into a product that is user oriented. This consciousness of the primacy of the user in product development has seen the rise to prominence of the Japanese and Italian product. Today much of design education the world over mirrors this perception.

b. The Products in the Indian context

The products in the Indian context are characterised by a poor level of quality and refinement. This fact is more a reflection of the pre-occupations of the manufacturer, than an actual lack of potential on his part.

Design in its efforts at quality improvement, would bring in the much needed perspective of orienting products towards the needs of the user. This assures sales of product because of appropriateness rather than low pricing.

This perspective in a way presumes that the manufacturer handles the technical component of making his product work, leaving the designer to enhance the overall value of the product. An appropriate high value product would be an object of desire and one creating such an object would be intimately connected with the cultural context. This implies a comprehension of the aspirations of the user and the society at large. The product functions not only as a tool to facilitate a particular activity but also provides the much needed freedom for contemporary man to create for himself an ambience and lifestyle appropriate to his dreams. In actual fact Design in the industrial system is often called upon to generate products suitable to a niche-market with a very specific image conception of itself.

The conception of the Industrial Design Programme proceeds from a premise that the

role of Design is in the creation of products -
from the precious object, to the strictly
utilitarian, to even the anxious object that aids
components of society in projecting their
cultural and sustainable character.

INTRODUCTION

In an age of rapid social, technological and cultural transition, the effective training of new designers must be based on a direct contact with the working and the creative faculties of maximum relevance.

The approach is based on three fundamental principles. The aim of the course would be to foster design experience. The theoretical inputs, technological and managerial aspects which are dealt with in the various courses and seminars are all focused on this central goal. The determination to take a professional design approach to the interpretation of culture and sustainability, conversely, to use design as a tool for cultural enrichment, would be the principal feature of the programme.

The programme would avoid favoring any single stylistic tendency; it defines its cultural policy through a variety of themes on each of which a variety of personalities would be invited to contribute; these contributors, would be drawn from the entire spectrum of design and artistic approaches.

The courses are based on broad topics which are at the same tune, highly relevant to the urgent issues concerning technical manufacturing and marketing aspects of the industrial world of today.

For this reason, the programme would need to maintain close links with the industry, both in order to keep in touch with the latest development in industrial processes as well as to ensure that the educational programme is relevant and comprehensive. However, in the interaction with the industry, care would be taken to ensure that academic and theoretical independence of programme is maintained, and also that the sharing of experience is mutual.

One of the teaching objectives would be the development of a constructive critical faculty with respect to existing design today.

PLACEMENT OPPORTUNITIES

A graduate of the design course would have the potential of practicing design in addition to Architecture. Hence career opportunities for

such an individual would be varied, firstly in the office of the Architect, secondly, in an industrial firm interested in design talent, or a combination of the above. The option of setting up a consultancy of his own would of course depend upon the young designer's drive and aspirations.

As part of its mandate to promote the practice of design and the consequent improvement of the quality of products - the programme would aid in the placement of the young designer and further continue to support their work in later life in an academic capacity.

The graduate would continue to be eligible to use the facilities of the school. And cooperation with the faculty and the ongoing education programme would be encouraged.

Credit Distribution:

Semester I 24

Semester II 24

Semester III 23

Semester IV 15

Total Credits for the Course: 86

Course Coding system and abbreviations:

Course Coding system: IDX%\$#

ID Name of the Department, ID - Industrial Design

X Type of the course

L - Lecture

T - Tutorial

S - Studio

I - Internship/ Training

E - Elective (Departmental)

O- Elective for Other departments

% Semester Number

1 - Semester I

2 - Semester II

3 - Semester III

4 - Semester IV

\$# Course Number for the semester

01, 02, 03, 04, 05, 06.....

L Lecture

T Tutorial

S Studio

Semester I

Core Credits

Course Code	Name of the Course	Credits				Duration (Hrs)	Assessment			
		L	T	S	Total		Internal	External	Total	Mode
IDL101	Design History & Design Theory	2	0	0	2	32	50	50	100	Exam
IDL102	Research Methods & Critical Writing	2	0	0	2	32	50	50	100	Exam
IDL103	Manufacturing Processes & Techniques	1	1	0	2	32	50	50	100	Exam
IDL104	Design Methods	1	1	0	2	32	50	50	100	Viva
IDT105	Communication & Presentation Techniques	0	2	0	2	32	50	50	100	Viva
IDS106	Studies in Form	0	0	2	2	32	50	50	100	Jury
IDS107	Design Project 1	0	0	10	10	160	250	250	500	Jury
Total		6	4	12	22	352	550	550	1100	

Electives

Electives offered by the Department. One elective to be opted by the student.

Course Code	Name of the Course	Credits				Duration (Hrs)	Assessment			
		L	T	S	Total		Internal	External	Total	Mode
IDE108	Mechanics & Electronics in Industrial Design	2	0	0	2	32	100	0	100	IO
IDE109	Digital Presentation Methods	2	0	0	2	32	100	0	100	IO
IDE110	Applied Arts & Crafts	2	0	0	2	32	100	0	100	IO

Total number of Credits and Marks for Semester I

Total Credits:

Core Credits + Elective = 22 + 2 = 24

Total Marks:

Core + Elective = 1100 + 100 = 1200

Semester II

Core Credits

Course Code	Name of the Course	Credits				Duration (Hrs)	Assessment			
		L	T	S	Total		Internal	External	Total	Mode
IDL201	Human Factors in Design	1	1	0	2	32	50	50	100	Exam
IDL202	Advanced Manufacturing Techniques	2	0	0	2	32	50	50	100	Exam
IDL203	Design Research	1	1	0	2	32	50	50	100	Exam
IDT204	Computer Aided Industrial Design 1	0	2	0	2	32	50	50	100	Viva
IDS205	Advanced Form Studies	0	0	2	2	32	50	50	100	Jury
IDS206	Design Project 2	0	0	10	10	160	250	250	500	Jury
Total		4	4	12	20	320	500	500	1000	

Electives

Students need to opt for two electives. One from the parent department and one from electives offered by other departments (Inter-Departmental Electives) of the School.

Course Code	Name of the Course	Credits				Duration (Hrs)	Assessment			
		L	T	S	Total		Internal	External	Total	Mode
IDE207	Advance Rendering Techniques	2	0	0	2	32	100	0	100	IO
IDE208	Social Design	2	0	0	2	32	100	0	100	IO
IDE209	Design for Sustainability	2	0	0	2	32	100	0	100	IO
IDE210	Studies in Usability	2	0	0	2	32	100	0	100	IO
IDE211	Design Engineering & Prototyping	2	0	0	2	32	100	0	100	IO
IDO212	Design Thinking	2	0	0	2	32	100	0	100	IO

Total number of Credits and Marks for Semester II

Total Credits:

Core Credits + Departmental Elective + Inter-Departmental Elective = 20 + 2 + 2 = 24

Total Marks:

Core + Departmental Elective + Inter-Departmental Elective = 1000 + 100 + 100 = 1200

Semester III

Industrial Training in Summer vacation after Semester II (Duration 6 weeks)

Course Code	Name of the Course	Credits				Duration (Weeks)	Assessment			
		L	T	S	Total		Internal	External	Total	Mode
IDI300	Industrial Training	0	1	0	1	6	50	0	50	IO

Core Credits

Course Code	Name of the Course	Credits				Duration (Hrs)	Assessment			
		L	T	S	Total		Internal	External	Total	Mode
IDL301	Design Management	1	1	0	2	32	50	50	100	Exam
IDL302	Product Detailing	1	1	0	2	32	50	50	100	Exam
IDL303	Systems Thinking & User Experience Design	2	0	0	2	32	50	50	100	Exam
IDT304	Computer Aided Industrial Design 2	0	2	0	2	32	50	50	100	Viva
IDS305	Design Project 3	0	0	10	10	160	250	250	500	Jury
Total		4	4	10	18	288	450	450	900	

Electives

Students need to opt for two electives. One from the parent department and one from electives offered by other departments (Inter-Departmental Electives) of the School.

Course Code	Name of the Course	Credits				Duration (Hrs)	Assessment			
		L	T	S	Total		Internal	External	Total	Mode
IDE306	Interaction & Interface Design	2	0	0	2	32	100	0	100	IO
IDE307	Mobility Design	2	0	0	2	32	100	0	100	IO
IDE308	Contemporary Technology in Design	2	0	0	2	32	100	0	100	IO
IDO309	Universal Design	2	0	0	2	32	100	0	100	IO

Total number of Credits and Marks for Semester III

Total Credits:

Training + Core Credits + Departmental Elective + Inter-Departmental Elective = 1 + 18 + 2 + 2 = 23

Total Marks:

Training + Core Credits + Departmental Elective + Inter-Departmental Elective = 50 + 900 + 100 + 100 = 1150

Semester IV

Core Credits

Course Code	Name of the Course	Credits				Duration (Hrs)	Assessment			
		L	T	S	Total		Internal	External	Total	Mode
IDL401	Intellectual Property Rights, Professional Practice & Entrepreneurship	1	1	0	2	32	50	50	100	Viva
IDS402	Thesis Project	0	0	12	12	192	300	300	600	Jury
Total		1	1	12	14	224	350	350	700	

Design Degree Show

Course Code	Name of the Course	Credits				Duration (Hrs)	Assessment			
		L	T	S	Total		Internal	External	Total	Mode
IDT403	Design Degree Show	0	1	0	1	16	50	0	50	IO

Total number of Credits and Marks for Semester IV

Total Credits:

Core Credits + Design Degree Show = 14 + 1 = 15

Total Marks:

Core + Design Degree Show = 700 + 50 = 750

Summary of the Course

Semester	Credits			Marks		
	Core	Other	Total	Core	Other	Total
Semester I	22	2	24	1100	100	1200
Semester II	20	4	24	1000	200	1200
Semester III	18	5	23	900	250	1150
Semester IV	14	1	15	700	50	750
Total	74	12	86	3700	600	4300

Course of Studies

IDL101 **2 1 0 1 0 1 2**

Design History & Design Theory

The history of cultures and lifestyles, as a study of objects of human use. The period before the birth of industrial design – craft- and years of design. Conception of design from Bauhaus, Ulm, the American style of the late 60's, the revivals of the 80's, the present. The intellectual leanings of design and the pragmatic view. Methodology and scientific approaches to analysis, and solution seeking. The History of Ideas.

IDL102 **2 1 0 1 0 1 2**

Research Methods & Critical Writing

In this module, the challenge is to address the wide disparity amongst the students of verbal expression skills in the English language. The objective is not only to introduce students to the necessity of appropriate research, as well as to the methods of conducting research and the conventions of writing a research paper, but also how to write correctly. Additionally, the students' are exposed to different styles of writing to show how the same content can be expressed by different writers and how this affects communication and reception of such content. This is done through directed readings on diverse subjects such as environment, civil society, technology, poetry, history, culture and design. A range of issues, opinions, exhibitions and writings pertaining to the students' own regional context as well as a national and global canvas, enable an awareness of the development of design as part of a larger whole. The assignments specifically help the students in:

- recognizing the subjective and objective aspects of research,
- identifying objectives and working out methodologies,
- recognizing the relative value of primary and secondary sources,

- putting together and rationalizing the structure of a research paper,
- and finally presenting it in a clear and concise format easily accessible to a range of reader

IDL103 **1 1 1 1 0 1 2**

Manufacturing Processes & Techniques

Processes from low investment handcraft to high tech 'no hands' processes of production.

Cane, bamboo, metal smithy, wrought iron, bell metal, fabrication, pipe working, carpentry, lacquer, glass blowing and glass working, furniture, sheet metal, hand working sheets, ceramics, pottery.

Spinning, sand casting, machining, die casting, press working, slotting, shearing, gas welding, arc welding, milling, pipe rolling, sheet rolling, drawing, extrusion.

IDL104 **1 1 1 1 0 1 2**

Design Methods

Understanding Design Methods, Processes and approaches toward solution seeking. Methods of exploring situations through Research (Ethnographic, Participatory and Evaluation), Understanding of user behaviour, Persona Profiling, data logging, data reduction techniques, specification writing, and Stakeholder Mapping.

IDT105 **0 1 2 1 0 1 2**

Communication & Presentation Techniques

Free Hand Drawing: Refresher in, drawing objects, form and nature. Treatment techniques in pencil, use of - charcoal, pen & ink, pastels, brush work and markers. Studies, in line, shading and texture.

Rendering: Two dimension representation of concepts and detailed designs. Surface representation, colour and surface quality representation. Quick renderings, concept renderings and detailed renderings. Simulating environment of use. Exercises in rendering glass,

chrome, plastic, metal, paint. Concave, convex, reflectivity, glass, mat and texture representation. Media studies - sketch pen, paints, airbrush, pencil, marker, inks, photo inks, and miscellaneous media like collage, transfers etc. Use of digital rendering media using latest software.

Technical Drawing: Engineering conventions for products. Component drawings, fabrication drawings, drawings for tooling, sections, cut-away and exploded views. Tolerances and specifications. Dimensioning for manufacture. Production processes and related conventions like draft, 1st angle reversed drawings for tooling, jig specific definitions.

Model Making: The ability to make 3 dimensional representations of ideas, concepts and complete designs. Quick models, studies in paper, card board, foam models, plastic, wood, plaster and models in mixed media, metal constructions. Hand working in various materials, tools usage and development, cutting, planing, filing, sanding and buffing. Machine working on wood, plastic, metals and mixed media. Functional models, links, details, fastening, joining, moving models. Surface treatments, painting, polishing, filling, masking, etc. Finishing - text, graphics, application, available materials, techniques and practices.

IDS106 0 | 0 | 2 | 2

Studies in Form

To develop awareness of form, its experiencing and creation. A bridge course that enables architects — designers of buildings — to shift their perspective from large sized artifacts to small artifacts using their existing methodologies of design and processes of decision making. The concept of visual excellence, detailing, overall form and details, object color and texture. An existing product will be chosen analyzed critically on aspects of proportion, form, color, and texture and redesigned.

Spatial analysis, spatial organization, depth illusion. Spatial composition in 2D & 3D space. Introduction to 2 dimensional and 3 dimensional form. Radii manipulation in 2D and 3D form. Exploration of surface textures in different

materials. 2 and 3D Form transition. Exploration of form to develop imagination and insight. Use of metaphors to generate new forms. Concept of family of forms. Introduction to 3D geometry. Basic 3D Forms: cube, tetrahedron, octahedron etc. and their imaginative use in generating complex forms and structures.

IDS107 0 | 0 | 10 | 10

Design Project 1

Design of an object from the perspective of cultural thinking.

CONTEXT: Design would have to reflect, traditions of use and cultural factors determining criteria of design, sociological perspective of products, user projection through ownership, life style patterns of products, comprehension: contemporary trends, fashion, style, and images of the next generation. Concentration on human-complexity rather than functional complexity. Marketing concepts, buying motives, design trend plots, fashion and style studied from psychographic data, definition of market.

Development of product brief, user interviews ace studies, market visits and studies, product placement, life style - product relationship, cost-price optimization, exclusive versus mass objects, image boards.

IDL201 1 | 1 | 10 | 2

Human Factors in Design

To develop awareness, acquire information, and experience human factors in design. Basic principles, anthropometry, scale models, and testing. Measuring the human body, tools, devices, static and dynamic anthropometry, force, pull and actuation comfort zones. Test rigs, testing parameters, evaluation of comfort, nature of use and intimacy, display and controls, grips, force & movement, body supports, comfort parameters. Perceptual comfort, visual reaction and cultural parameters. Safety and design. Ceremony, tradition and use of discomfort. Parameters of culture and tradition on comfort, relaxation, postures, and behavior of use.

IDL202
2 1 0 1 0 1 2
Advanced Manufacturing Techniques

Die making, EDM, hardening & annealing, tool design, tool manufacture, die trials, etching, wire cutting, boring, polishing.

Plastic industries, FRP, foaming of plastics, PU moulding, thermoforming, injection moulding, vacuum forming, compression moulding, extrusion, pultrusion, casting, calendaring, ultrasonic welding, vacuum metallizing.

Wood, seasoning, steam bending, thickening, planning, moulding, surface finishes, joining, combination, press working.

IDL203
1 1 1 1 0 1 2
Design Research

The Semester is structured with the understanding that it is essential to encourage students of Design in India to participate, learn from and respond to the design and manufacturing skills relevant to our culture and society. The Design Research Theme thus aims to encourage them to research within the context of the Indian civilization which is one of the oldest, in the context of the challenges faced by Indian Design today in an increasingly standardized and homogenized world.

The thrust in this Semester is to help students build on their strengths and overcome their weaknesses.

The exercises over the last semester are devised to increase proficiency in research, particularly with respect to interpreting information, and organizing it in an overall holistic context. Simultaneously, students are guided in 'reading' between the lines (how much should you believe/ how do you decide what to believe and what not to believe/ how the same facts can be interpreted differently depending on the orientation of writer/ reader) to authentically assess designs shorn of any marketing hype and encouraged to recognize true innovations. In class-discussions, students are expected to question conventions and accepted ideas, to think independently, and to not toe any official line. They are also encouraged to inspire their vision of design by

interacting with skilled craftspeople, who are repositories of primary sources of cultural information. Suggested thrust area: Product Services, Systems & Environments in the indigenous context.

IDT204
0 1 2 1 0 1 2
Computer Aided Industrial Design 1

Introduction to computer aided industrial design. Using database for material selection. Structure of CAD programmes and hardware. Relation of object space and screen space, 2D & 3D database.

Introduction to solid modeling. Detailed study of solid modeling software, studio exercises in solid modeling applications. Animation techniques and product animation. Product design task, communication of designs using CAD.

IDS205
0 1 0 1 2 1 2
Advanced Form Studies

To develop insight into form, design and develop sophistication in its application to cultural products. Detailed study of the structural, perceptual and spatial properties of well ordered three-dimensional orientable and non-orientable

forms, their composition and the process of designing them. Experience of working in an area where objects convey information through formal 'qualities'.

Qualitative characteristics; analogies; gestalt psychology, perception, responses and subliminal codes. Form, color, order, symmetry, tension, texture, concavity, convexity, rectilinear/ curved form, mathematically definable and indefinable forms, Information theory, fractals, simplicity and complexity, scale, miniaturization, integration and articulation.

A tutorial where an existing product is chosen and reworked to express a certain quality. The presentation is to be as explanation/ through metaphor/ analogy into formal criteria - the final product would be a finalised model in foam, plaster or other easily workable material.

IDS206

0 1 0 | 1 0 | 1 0

Design Project 2

Design of an object from the perspective of individual expression.

CONTEXT: Arts, expressive, tendencies, design motives, product differentiation, need, cost optimization. Objects of low intimacy and historical styles individual expressions.

IDL301

1 1 1 1 0 | 2

Design Management

Management, Marketing & Innovations: The course analyses the innovations which have occurred in the worlds of fashion and design with respect to their competitive markets: strategic positioning, marketing, distribution and image. The aim is to give the designer a better understanding of the issues and terminology of the commercial context in which he will be working.

Design Management: Through the examination of company case studies, drawn from leaders in the design sector, factors influencing design management and company design policy are examined in depth.

The Concept of quality: The intention is to arrive at a new concept of 'Quality' based on the direct sensory response of the user. The course aims to develop critical awareness in the areas to light, color, and acoustic properties, tactile and factory aspects which form the specification matrix of the modern product.

IDL302

1 1 1 1 0 | 2

Product Detailing

To develop creative conceptualization capabilities in form and structural integration and its implications to user society and the producer. Product in its context, family of products, interchangeability of parts, Indian and foreign standards, market availability. Detailing plastic products while using processes like injection moulding, compression moulding, blow moulding and FRP moulding using hand laying and compression processes. Detailing for fabricated

products in sheet metal, steel tubes and channel sections, aluminium sheets and extruded sections of different materials. Detailing for die casting and die design. Detailing for fabrication involving combination of materials like fabric, foam leather, cloth, rubber, plastic, metal, wood, adhesives, rivets, welding, brazing and mechanical fasteners. Selection of control panel elements, graphics and typography, colour schemes, safety and maintainability, operating manuals.

Study of well detailed products, product design task Visual creativity and communication. Product design task, selecting a product with wide configuration options and alternative options.

IDL303 2 | 0 | 0 | 2

Systems Thinking & User Experience Design

IDT304

0 1 2 | 1 0 | 1 2

Computer Aided Industrial Design 2

To develop proficiency of use of computers for industrial design. Introduction to surface modeling. Studio exercises in surface modeling applications.

IDS305

0 1 0 | 1 1 0 | 1 0

Design Project 3

The role of the Designer as an interventionist to bring about social change through technological and sustainable thinking

CONTEXT: Total Design - Information collection, existing product analysis, market research, development of brief, concept generation as an audit of possibilities.

Ergonomic studies, cost analysis, Social environment impact analysis value engineering, optimization, productivity improvement, product improvement. Block modelling, technical analysis, production methods analysis, operational analysis, manufacturing methods, pilot production. Team working, decision strategies, coordination of management and technical parameters, maintenance and service analysis.

IDL401 **1 1 1 1 0 1 2**

Intellectual Property Rights, Professional Practice & Entrepreneurship

Nature of Intellectual Property; Patents, Designs, Trademarks and Copyright; Process of patenting and development; technological research, innovation, patenting, development; International cooperation on Intellectual Property; International treaties on IPRs; Patenting under PCT. Procedure for grants of patents.

Scope of Patent Rights; Licensing and transfer of technology; Patent information and databases; Geographical Indications.

Administration of Patent System. New developments in IPR; Case Studies; IPR and Design.

IDS402 **0 1 0 1 1 2 1 1 2**

Thesis Project

The student has to undertake a project to demonstrate his abilities as a designer. Of particular importance would be to carry the project upto completion as a prototype or productionized product.

The project should be chosen with care and should have scope and potential to demonstrate the Student's maturity, attitude and approach as a professional. The project should reflect the students' ability to Study, research; analyze concepts and solutions in terms of sketches, prototypes or products.

A guide with experience in the particular product area would have to be chosen by the student. He will be required to submit progress reports to his guide and keep him informed about the progress of his project: seek advice about retaining his academic perspective. The evaluation of the final project will be through assessment by the guide and a final jury on his successful completion of the project.

IDI300 **0 1 1 1 0 1 1**

Industrial Training

To provide exposure to working in a real life situation - in the industry - to comprehend role of designer and processes of object development and manufacture.

The student will spend his Summer Vacation - a period of 6 week in an industry. The department will aid in the placement of the student. This experience need not result in the student designing a product. The student would have to submit a report about his experience and draw conclusions about the functioning of the industry and the role of the designer.

IDT403 **0 1 1 1 0 1 1**

Design Degree Show

The students would be required to organize a Design Degree Show and present their work to the public. They also need to initiate the Placement process for their respective batch. They are required to plan & design various product elements needed for their own placement in the industry and preparation of exhibition/ literature needed for exhibitions of their work.

Suggested Electives

- 1. Typography**
- 2. Colour Theory**
- 3. Craft Documentation**
- 4. Branding and marketing**
- 5. Anthropology**
- 6. Design writing**
- 7. Design Policy**
- 8. Internet of Things**
- 9. Frugal Design and Innovation**