DEPARTMENT OF PRODUCTION ENGINEERING
NATIONAL INSTITUTE OF TECHNOLOGY, TIRUCHIRAPPALLI-620015.

COURSE OUTLINE					
Course Title	**PRODUCT DEVELOPMENT STRATEGIES**				
Course Code	PRPE25	No. of Credits	03		
Department	Production Engineering	Faculty	N. Jagadeesan		
Pre-requisites Course Code	PRPC 22				
E-Mail	gowri.j@rediffmail.com	Contact No.	9443354811		
Course Type	Core course		Elective course	✓	

Course overview

Product Development, Product Design –Conceptual Design, Detailed design- Reverse engineering, Concurrent engineering, Tear down approach.
Design to cost; Design to value, DFMA, DFE, Design for robustness.

Product development – Need for NPD, Gathering of customer needs &wants, Importance of strategy in Product Management, Cost leadership strategy, product differentiation & product positioning strategies, product portfolios

Course objectives

- To have a better appreciation of the current/ emerging trends in product mgt & product development -also to understand the importance of adopting appropriate strategies in helping the firms achieve competitive advantage

Course Outcomes

- Understand the challenges & advancements of modern product dev. process
- Execution of tactful product development practices
- Ways & Means of gathering customer needs & wants
- Knowing the compulsions of development of environmentally friendly products/processes

(1/5)

S. No	Week	Topic	Mode of Delivery
1	1st Week	Product design & development – overview	Lecture C&T/ PPT
2		Product design – Definition, its increasing importance	
3		Product development – definition , examples	
4		Product life cycle, role of product managers	
5	2nd Week	Designers Vs Product developers - role clarity	
6		Conceptual design	
7		Detailed design	
8		Types of design	
9	3rd Week	PLC , TLC, S Curve	Lecture C&T/ PPT
10		Reverse engineering	
11		Concurrent engineering	
12		Redesign	
13	4th Week	Modern Product Development Process	
14		Examples, Case studies in PDP	
15		Cost Leadership Strategy – a case study	
16		Differentiation Strategy – a case study	
17	5th Week	Portfolio Management	
18		Brain Ball theory & practice	
19		6-3-5 Idea generation method	
20		Product performance measurements	
21	6th Week	DFM	Lecture C&T/ PPT
22		DFA	
23		Bottom up Vs top down approach	
24		Design for robustness	
25	7th Week	Robustness strategy	
26		DFE	

(2/5)

27		LCA	
28		Disassembly	
29	8th Week	Recyclability, Remanufacturing	Lecture C&T/ PPT
30		Case study on NPD initiatives	
31		Price skimming strategy	
32		Price penetrating strategy	
33	9th Week	DTC,DTV	
34		4Ps of Marketing /selling	
35		4 Cs of Marketing /selling	

COURSE ASSESSMENT METHODS

S.No	Mode of Assessment	Syllabus	Date	Duration	% Weightage
1	Cycle Test 1	Unit – 1,2 (upto 4th week)	29/8/2017 30	60 Minutes	20
2	Cycle Test 2	Unit – 3,4 (upto (9th week)	5/10/2017 6	60 Minutes	20
3	Assignment	-	-	-	10
4	Re - test	-	-	60 Minutes	Refer course policy
5	Descriptive Type Examination(End Semester)	-	-	180 Minutes	50
Total Assessment				6 Hrs	100

ESSENTIAL READINGS: Textbooks, Reference Books Website addresses etc.

Text Books

1 Karl T Ulrich and Steven Eppinger, —Product Design and Developmentl, McGraw Hill, 2011, Fifth Edition

Reference Books

1.Kevin Otto and Kristin Wood, —Product Design – Techniques in Reverse Engineering and New Product Development, Pearson Education, 2004.

(3/5)

COURSE EXIT SURVEY (mention the ways in which the feedback about the course is assessed and indicate the attainment also)

- Feedback from the students during class committee meetings
- Anonymous feedback through questionnaire

COURSE POLICY (including plagiarism, academic honesty, attendance, etc.)

EXAMINATION:

1. Students must attend all the examinations (cycle tests and end semester examination). If a student fails to attend any of the cycle tests due to genuine reason he/she will be permitted to write re-test and the portion will be the combined portion of cycle test 1 and 2.
2. Students should submit assignments as per the instructions given in the class. Late submission is not permitted.

ATTENDANCE

1. The minimum attendance for appearing for the semester examination is 75%.
2. Those students, whose attendance falls below 75% but above 50% in the course, shall attend mandatory classes before the semester examinations to qualify to write semester exam.
3. The students who are having attendance less than 50% has to redo the course in the next semester or academic year (at the time of offering the course).
4. The Institute follows relative grading with flexibility given to teachers to decide the mark ranges for grades. The assessment of the course will be done on the basis of marks.

ACADEMIC HONESTY & PLAGIARISM

1. All the students are expected to be genuine during the course work. Taking of information by means of copying simulations, assignments, looking or attempting to look at another student's paper or bringing and using study material in any form for copying during any assessments is considered dishonest.
2. Tendering of information such as giving one's program, simulation work, assignments to another student to use or copy is also considered dishonest.
3. Preventing or hampering other students from pursuing their academic activities is also considered as academic dishonesty.
4. Any evidence of such academic dishonesty will result in the loss of marks on that assessment. Additionally, the names of those students so penalized will be reported to the class committee chairperson and HoD of the concerned department.

5. Students who honestly producing ORIGINAL and OUTSTANDING WORK will be REWARDED.

CORRESPONDENCE

1. All the students are advised to check their NITT WEBMAIL regularly. All the correspondence (schedule of classes/ schedule of assessment/ any other information regarding this course) will be done through their webmail only.
2. Queries (if required) to the course teacher shall only be emailed to the email id specified by the teacher.

ADDITIONAL COURSE INFORMATION

The faculty is available for consultation at times as per the intimation given by the faculty.

FOR APPROVAL

Course Faculty _____ **CC-Chairperson** _____ **HOD** _____

5/5