

PRODUCT PLANNING & DEVELOPMENT

Advanced Manufacturing Laboratory

Department of Industrial Engineering
Sharif University of Technology

Session # 1

Course Description

- **Instructor:**

- Shokraneh K. Moghaddam, PhD. Department of Industrial Engineering, Sharif University of Technology
- Email: sh.k.moghaddam@gmail.com

- **Class Time:**

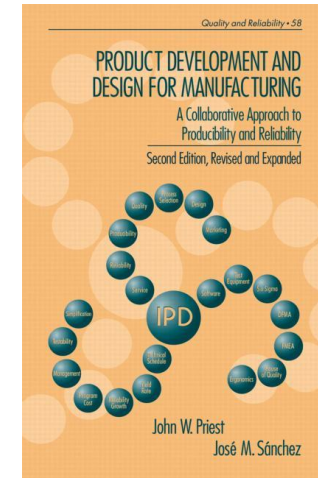
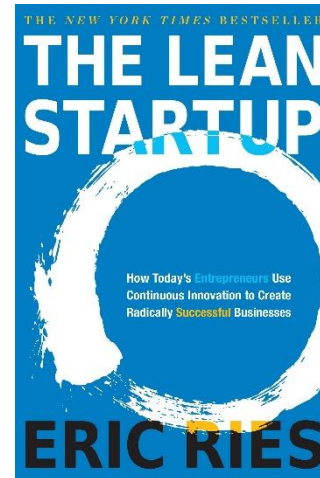
- Sunday-Tuesday 15-16:30

- **Course Evaluation:**

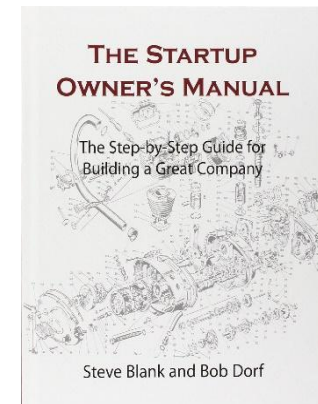
- Mid-term (25%)
- Final Exam (40%)
- Quiz (5%)
- Tasks (30%)

Course Description (*Continued...*)

- **Mid-term Session:**
 - 12th Azar, 1398, 15~16:30
- **Final Exam:**
 - 5th Bahman, 1398, 9:00~11:00



- **References:**
 - Priest, J. and Sanchez, J., 2012. *Product development and design for manufacturing: a collaborative approach to producibility and reliability*. CRC Press.
 - Mital et al. , 2014. *Product Development A Structured Approach to Consumer Product Development, Design, and Manufacture*, Butterworth-Heinemann.
 - Ries, E., 2011. *The Lean Startup*, Crown Publishing Group
 - Blank, S and Dorf, B, 2012. *The Startup Owner's Manual*. K&S Ranch Press.

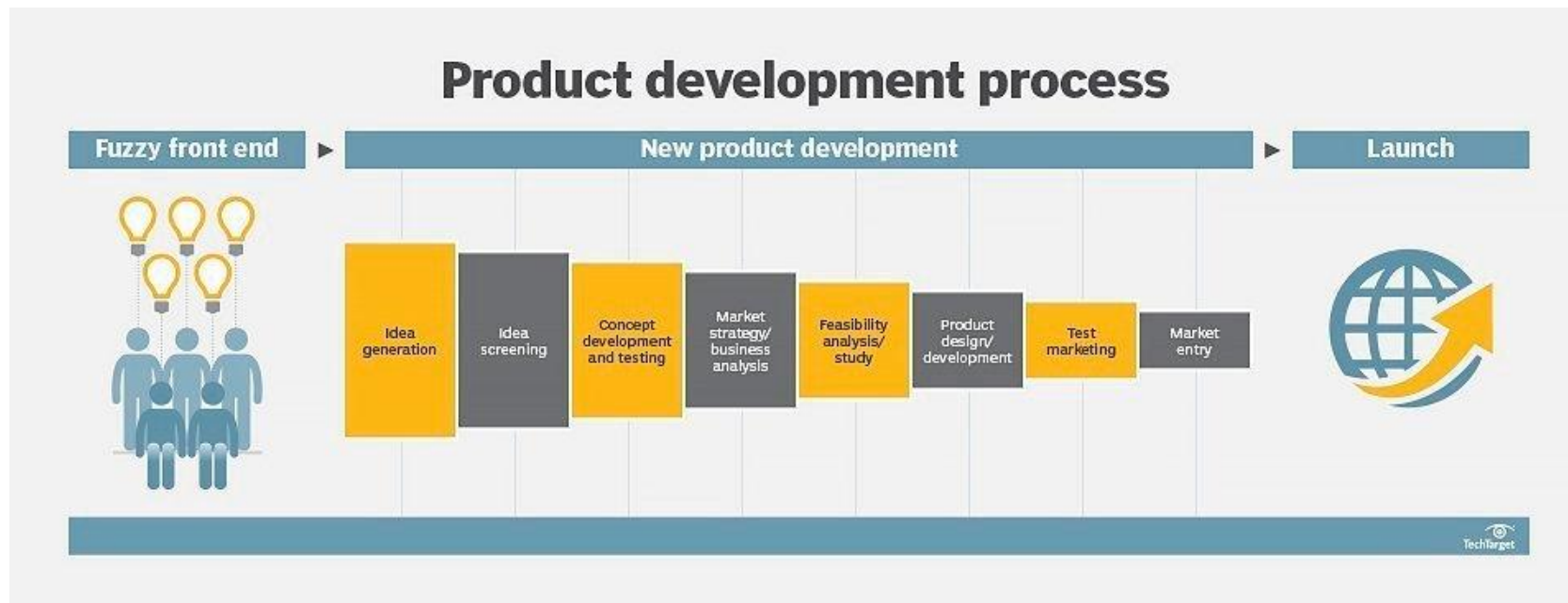


Course Description (*Continued...*)

- **Product Development in the Changing Global World**
- **Developing Successful Products**
- **Stages of Product Development**

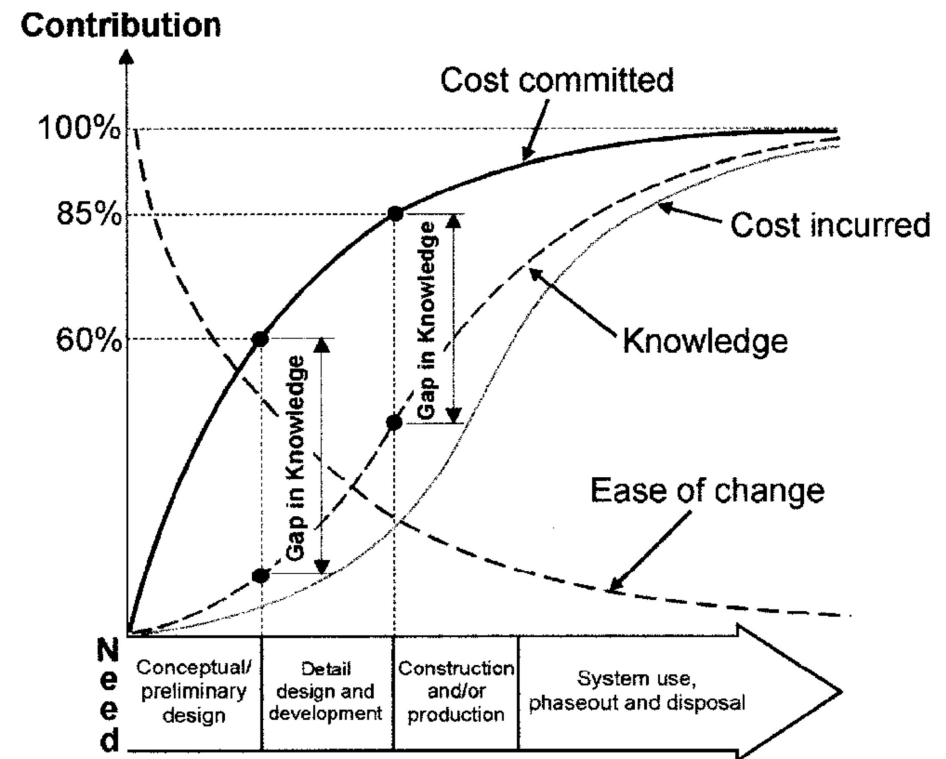
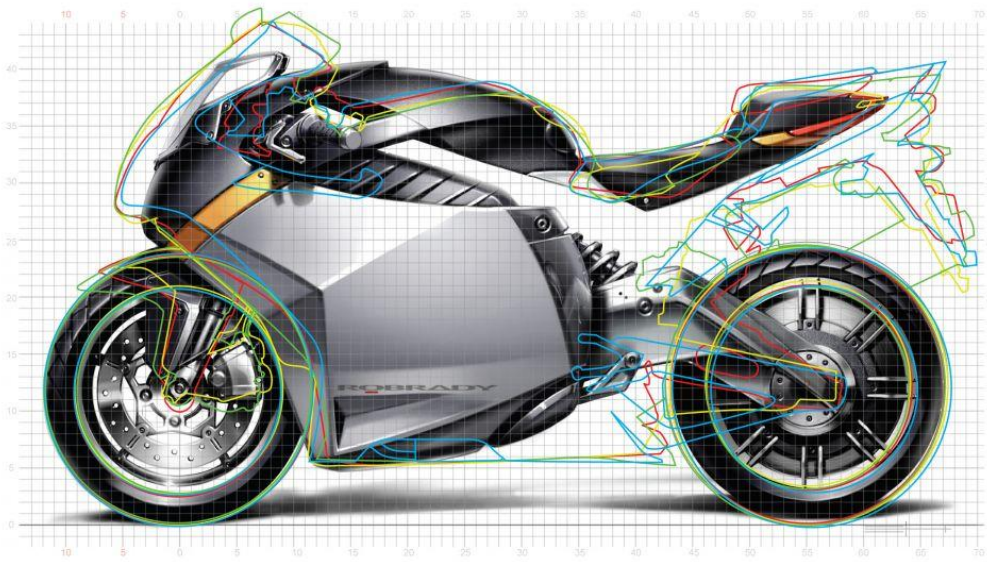
New Product Development

- In business and engineering, new product development (NPD) covers the complete process of bringing a new product to market.
- NPD is described broadly as the transformation of a market opportunity into a product available for sale.



New Product Development

- A central aspect of NPD is product design, along with various business considerations.



New Product Development

- **Bad product designs teach us many lessons**
 - The product is designed with appearance in mind, forgetting the practical function of the product in the process.
 - Product design is a lot more than making a product that looks good – you also need to consider the impact of your design decisions.

Beautiful... if you like going blind.

20 Fenchurch Street



New Product Development

- **Bad product designs teach us many lessons**
 - Back in 2010, an Indian cellphone startup called LAVA decided to introduce a revolutionary new product.
 - It's a cell phone with a full QWERTY keyboard – with one “minor” difference. In an attempt to innovate (Over-design) they did away with the keyboard layout that, *oh, every single human being is familiar with.*

Look familiar? Guess what, IT'S NOT!



New Product Development

- **Bad product designs teach us many lessons**
- Another example of poor interface design that could have been prevented with a little bit of user testing.

Okay, let's go up. No.. down. Forget it, I'm pressing both of them.



New Product Development

- The product can be tangible (something physical which one can touch) or intangible (like a service, experience, or belief).



New Product Development

- Due to challenges and uncertainties, the use of best practices is required.

