1. Course number and name
   ENGR290: Design Methodology  Spring 2017

2. Credits and contact hours
   1 credit hour; Eight 1hr 35m lectures, 7 weeks @ 1 lecture session/week.

3. Instructor’s or course coordinator’s name
   Instructor: Dipendra K. Sinha, Professor. S131 OH Tue 1-2, W 3-5 or by appointment

4. Recommended Reading
   d. Cross, Nigel, *Engineering Design Methods*, John Wiley & Son
   h. Hand outs at “ilearn.sfsu.edu” website.
   i. Sustainable Design DVD cat# 67577
   j. Engineering Design Videotape Cat# 11085 (SFSU Lib.)
   k. Design for Manufacture DVD Cat # 66879 (SFSU Lib.)

5. Specific course information
   a. brief description of the content of the course (catalog description)
      Various approaches to design of engineering systems. Systematic approach to
      engineering design work. Various strategies in resolving mechanical engineering design
      issues in a teamwork environment are presented and practiced.

   b. prerequisites or co-requisites
      sophomore standing

   c. indicate whether a required, elective, or selected elective course in the program
      Required for Mechanical Engineering students

6. Specific goals for the course
   a. specific outcomes of instruction, ex. The student will be able to explain the significance
      of current research about a particular topic.

      Student develops a systematic approach to engineering design and problem solving
      Student have develops communication skills to present intuitive concepts to design

   b. explicitly indicate which of the student outcomes listed in Criterion 3 or any other
      outcomes are addressed by the course.
Course addresses ABET Student Outcome(s):a,d,g

7. Brief list of topics to be covered  
   a. Engineering problem solving  
   b. Solving Engineering Analysis Problems  
   c. The Design Process  
   d. Communicating Solutions  
   e. Scheduling and Planning a Design Project  
   f. Grading:  
      5 research papers covering different aspects of engineering design and the process and technical writing exercises

8. Grade Distribution:  