COURSE LECTURERS

- CS: Altay Güvenir
- EE: Tarık Reyhan
- IE: Yiğit Karpat
- MAN: Tolga Baycan
- COMD: Julide Aksiyote

Course web page: http://ge402.bilkent.edu.tr
COURSE ASSISTANTS

- CS: Arif Usta  arif.usta@cs.bilkent.edu.tr
- EE: Altuğ Süral  altug@ee.bilkent.edu.tr
- EE: Meltem Gizem Önal  mgonal@ee.bilkent.edu.tr
- EE: Burak alptuğ Yılmaz  alptug@ee.bilkent.edu.tr
- EE: Okan Ünlü-grader  unlu@ee.bilkent.edu.tr
- MAN: Hasan Yılmaz  m_h_yilmaz@ug.bilkent.edu.tr
- IE: No assistant

Course web page:  http://ge402.bilkent.edu.tr
INNOVATIVE PRODUCT DESIGN AND DEVELOPMENT, GE401-GE402

- This is a 3 credit course (per semester)
- This is a two-term course, ie: GE401 and GE402 must be taken consecutively,
- Prerequisite list is given at the following slides
DEPARTMENTS PARTICIPATING
(alphabetical order)

- Department of Communication and Design
- Computer Engineering
- Economics
- Electrical Engineering
- Graphic Design
- Industrial Engineering
- Management
GE401 and GE402 can be taken in the place of:

- **In Electrical Engineering**, EE491 and EEE495
- **In Computer Engineering**, CS491 – CS492 sequence,
- **In Industrial Engineering**, IE477 – IE478 sequence,
- **In Management**, Dept. Elective and Business Strategy, respectively,
- **In Graphic Design**; Elective courses,
- **In Communication and Design**; Elective courses,
- **In Economics**; Econ Elective and non-Econ elective, respectively.
INNOVATIVE PRODUCT DESIGN AND DEVELOPMENT, GE401-GE402

- **EE:**
  - EEE212-Microprocessors
  - EEE313-Electronic Circuit Design
  - EEE321-Signals and Systems

- **CS:**
  - CS202-Fundamental Structures of Computer Science II
  - CS319-Object-Oriented Software Engineering

- **IE:**
  - IE271-Operations Analysis
  - IE375-Production Planning
INNOVATIVE PRODUCT DESIGN AND DEVELOPMENT, GE401-GE402

- **MAN:**
  - MAN321-Corporate Finance

- **ECON:**
  - ECON301-Econometrics I

- **GRA:**
  - GRA301-Graphic Design III

- **COMD:**
  - COMD305-Digital Video Production I
Team (Company) organization (suggested)

- CEO (Chief Executive Officer)
- Finance
- Engineering
- Production
- Quality
- Marketing
Team Organization (suggested)

- Design: Electrical, Computer and Industrial eng.
- Business plan: Management, Economy and Industrial Eng.
- Project management: Industrial Eng.
- Quality: Industrial Eng.
- Communications, and web page design: Graphic design, Comm. And Design, Computer and Industrial Eng.
THE COURSE STRUCTURE

- THE PROJECT
- SEMINARS
- WORKSHOPS
- STOCK MARKET
- COACHING:
  - Each Discipline coached by the same discipline
  - Weekly meetings with lecturers for EE, CS, IE and MAN
  - EE and CS students meet regularly at EE103 on Fridays at 15.40
  - EE and CS students work on their projects at EE102 during free hours
  - Graded in the discipline for about 50%
THE PROJECT-1

- Students propose a project
- Lecturers act as advisors to the students
- Sell the idea to course lecturers and get venture capital
- Work on different functions of running a company while realising the project
- Complete and demonstrate the product at the end of the year (This is a must)
THE PROJECT-2

- Students propose an innovative project
- Innovative means-examples:
  - A new idea,
  - A new process,
  - An idea that makes production easier or makes life easier for mankind
  - To sum up; something that makes life easier for the mankind-e.i, something that makes money or saves money.
At this course, students are encouraged to develop ideas and projects that are not commonplace and that is expected to produce wealth if realized either in Turkey or in the World.

Projects must contain enough technical content, which will fulfil the senior project requirements of EE and CS departments.

Projects must be conducted in such a manner that will fulfil the senior project requirements of IE department.

Projects must be conducted in such a manner that is acceptable to ECON, MAN, GRA and COMD departments for their students to participate.
LAB SESSIONS FOR ENGINEERS

- Classroom is at EE-01
- EE AND CS students get together at EE-103, weekly during 15.40-17.30 on Friday
- They work on their projects and designs with the help of course advisors and assistants.
- EE AND CS students work at EE-102 at their free time,
- EE AND CS students get a locker for their equipment at EE-102
SEMINARS

- About 15-17 seminars per year on subjects related to start-up company running
- Distinguished lecturers from both the business and academia
INDUSTRIAL METHODOLOGY

- Literature Survey and Competition Report
- Product Requirements
- Product Specifications
- System Design and Preliminary Design
- Product and Subassembly Specification
- Detailed Documents (Technical Drawings)
- Development Plan
- Configuration Management
- Quality (Quality Function Deployment)
- Quality Certification (Based on industrial Methodology)
WORKSHOPS

- Workshops about current subjects and/or about the projects of teams.
- The second hour will be used for workshops, business plan preparation, etc. at some instances.
STOCK MARKET

- The stocks of the companies established by the students will be traded at the virtual stock market during the second semester.
- Some of the lecturers of the Bilkent University will act as the traders of the stock market.
- The success at the stock market will be part of grading.
TEAM STRUCTURE

- Maximum of 6 Students
- Minimum of 4 students
- Maximum of 2 Students From a Single Department
- Total of 2 students from MAN and ECON
- Total of one student from GRA and COMD
- Only One Student From Industrial Engineering Department if there is MAN student in the team
- Maximum 8 teams
- Diversity is desired to promote multidisciplinary structure
INNOVATIVE PRODUCT DESIGN AND DEVELOPMENT, GE401-GE402

- New era in the World
- Success through economic and military power
- New technology is the key for both
- Big company blues
- Small companies and start-ups are innovative
- This course gives you the chance to work in a start-up company environment
- Innovate/run/grow/change continuously
- Synergy at technoparks
INNOVATIVE PRODUCT DESIGN AND DEVELOPMENT, GE401-GE402

- Innovation, creativity,
- Interdisciplinary collaboration,
- Project and team management,
- Simultaneous emphasis on the originality and the marketibility of an idea,
- Involvement of a large number of students from different faculties,
- Real-life experience at the university level.
BENEFITS OF THE STUDENTS

- Hands-on project running experience
- Broadened student vision of the industrial and working environment
- Early work experience-company orientation starting at senior level
- Up-to-date information from distinguished lecturers on practical matters of running a company
- An important reference on C.V.
- Opportunity of interaction with a company at senior level (If worked at a company related project)
INNOVATIVE PRODUCT DESIGN AND DEVELOPMENT, GE401-GE402

Üniversiteli Patron Öğrenciler
Hürriyet İnsan Kaynakları, 18 Eylül 2002
<table>
<thead>
<tr>
<th>Date/Time</th>
<th>Event Description</th>
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<tbody>
<tr>
<td>1st week (First Tuesday, 12.30)</td>
<td>Course presentation at <strong>EE-01 Auditorium</strong></td>
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<tr>
<td>1st week (First Tuesday, 17.40)</td>
<td>The first meeting at <strong>EE-01 Auditorium</strong> (Teams formed)</td>
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<tr>
<td>1st week (First Wednesday, 13.40)</td>
<td>First classroom at <strong>EE-01 Auditorium</strong>, problems about teams and projects are discussed either in public or in private</td>
</tr>
<tr>
<td>1st week (First Thu., 11.00 Noon time)</td>
<td>Team lists and preproposals are submitted (by e-mail to me and signed copies are submitted to my mail box at the EE departmental secretarial office)</td>
</tr>
<tr>
<td>1st week (First Thu., Evening)</td>
<td>Preproposals evaluated and commented (Winning teams announced the web page and replied by e-mail) and winning teams registered to the course</td>
</tr>
<tr>
<td>1st week (First Saturday, 12.00 Noon time)</td>
<td>2nd round of team proposals are submitted by mail and evaluated by Saturday night and results sent to students by Sunday evening.</td>
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<tr>
<td>2nd week, Monday</td>
<td>The last day of add/drop, unsuccessful teams register to other courses.</td>
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NAME OF THE PRODUCT
(Team number)

Date:
Team and team composition:

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<tr>
<th>Student ID</th>
<th>Name</th>
<th>Dept</th>
<th>e-mail</th>
<th>Cell phone no</th>
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Short explanation of the project (at most one page):
Explain here what the principle function of the project is and who will use the project (Target customer). Also explain the basic method of realizing the project.

Required resources and approximate cost:

Equipment:

Materials:

Basic roles of the students in the teams:
(Such as HW designer (EE), SW designer (CS), Project manager (IE), Financial manager(MAN, ECON), graphic design and communications (COMD, GRA))
Preproposal Form-18.09.2012- Template for the project proposals can be downloaded here

Bilkent University
2014-2015 Fall

GE401-402: Innovative Product Design & Development I-II

Announcements

To be announced later!

16.09.2014 -- Template for the project proposals can be downloaded here.

15.09.2014 -- Welcome New Students! You can find some updated information about the course here.

Contact
For questions and comments:
altug@ee.bilkent.edu.tr

This page was last updated: Tuesday 16:56, September 16, 2014
Office hour

- Tarık Reyhan
  - Wednesday, 16.00-17.00
  - EE Office, EE-301

- The complete list will be announced at the MOODLE
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<th>Year Range</th>
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<td>2001-2002</td>
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<td>2012-2013</td>
<td>8 companies</td>
</tr>
<tr>
<td>2013-2014</td>
<td>9 Companies</td>
</tr>
</tbody>
</table>
WHERE TO LOOK FOR PROJECTS

- Internet (Just for inspiration)
- FP6  www.cordis.lu
- Eureka    www.eureka.be
- National Science Foundation, USA  
  www.nsf.gov
WHERE TO CHECK YOUR INNOVATION

INTERNET
EXPERIENCES OF STUDENTS OF PREVIOUS YEARS