The title of this year’s project is “Butadiene Production.”

Note 1: Your goal during the project is to design butadiene production plant. There will be four design groups which you will form, groups will work on two different plant capacities as given below. Capacities may change upon the literature search.

<table>
<thead>
<tr>
<th>GROUP</th>
<th>Plant Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>A and B</td>
<td>30,000 tons/year</td>
</tr>
<tr>
<td>C and D</td>
<td>50,000 tons/year</td>
</tr>
</tbody>
</table>

ORGANIZATION

The process design project will involve three parts plus the final report. A report will be submitted for each part. Important deadlines are as follows:

**Part A (3 weeks)**: Literature search, preliminary flowsheet, and equipment list. Deadline: 5 March 2003.
Technical trip to Yarımcıa Butadiene production process (Date: 2-3 March 2003).

**Part B (7 weeks)**: Material and energy balances for proposed flowsheet.
*Environmental Assessment*
- Instrumentation and Control
Deadline: 21 Nisan 2003

**Part C (5 weeks)**: Scale-up and Economic evaluation of proposed process flowsheet.
Deadline: 28 May 2003

**Final Report**: Final report.
Deadline: 4 June 2003

**Presentations**: Student design team presentations to panel of academics and industrial experts.
Date: 10 June 2003.

Note: Late submissions % 30 deduction of the report grades. Late submissions after three days will not be accepted.

ENVIRONMENTAL ASSESSMENT is lead by Dr SC Sofuoglu

Environmental assessment include (1)identification of potential pollution sources, such as leaks, effluents, etc., in the process, (2)identification of species that are introduced to the environment by each source, (3)determination of potential impact of each species on human health and environment, (4)making a decision for each source on the type action that should be applied: (a)application of control measures or (b)recycle/reuse or (c)“no action.” If action-a is to be applied listing available technologies, advantages and disadvantages, and a selection, if action-b is to be taken evaluation of possible effects on the process and estimation of reduction in the emission to the environment, if action-c is chosen listing the factors that directed you to this decision and to convince the reader by presenting proofs.