up with a process to remove sulfur from Western Kentucky coal (4% S, about half organic sulfur and half pyritic sulfur). A 2-minute presentation was to be made to the Governor and his aides trying to sell them on this process as part of his $50 million energy package. (This bill was eventually signed in the Chemical Engineering Department's Unit Operations Laboratory.) Having received the assignment, one group left the room, and we wondered if they would return. The groups in the room became actively engaged in discussion, and those students doing coal research projects were particularly vocal. It was the first time for many to verbalize their ideas of coal processing based on class lectures and outside reading. No new processes evolved but a valuable learning experience occurred.

The remaining course topics were covered in one or two sessions except for nuclear which was presented in three lectures. Professor Bill Conger of our department covered the hydrogen economy concept based on his research in collaboration with Dean Funk.

Two special classes were those led by distinguished visitors to the Engineering College. Professor Jimmy Wen, Chairman of the Dept. of Chemical Engineering at West Virginia, gave an excellent overview of the short and long term solutions to the U. S. energy problem. Near the end of the semester, Professor Jack Howard, co-author of the text, gave an extemporaneous talk on tar sands and oil shale which supplemented the heavy emphasis on coal during most of the course.

Table 1

ENERGY ENGINEERING COURSE OUTLINE

I. Energy Consumption, Demand, Transportation, Storage, and Costs (CEH)
II. Thermodynamic Laws Governing Conservation and Availability of Energy (JTS)
III. Fossil Fuel to Fuel Conversion
  A. Low-Btu Gas (JTS)
  B. Pipeline Quality Gas (RIK)
  C. Synthetic Crude Oil (RIK)
  D. Solvent Refined Coal (CEH)
IV. Dependence of Industry on Hydrocarbon Feedstocks
  A. Petrochemical (JTS)
  B. Steel, Glass, Fertilizer, etc. (RIK)
V. Electrical Power Generation
  A. Non-Nuclear (OWS)
  B. Nuclear (OJH)
VI. Other Energy Sources
  A. Geothermal (JTS)
  B. Magnetohydrodynamics (CJC)
  C. Solar (CEH)
  D. Fuel Cells (RIK)
  E. Hydrogen economy (WLC)

CACHE COMPUTER PROBLEMS

CHEMICAL ENGINEERING EDUCATION, in cooperation with the CACHE (Computer Aides to Chemical Engineering) Committee, is initiating the publication of proven computer-based homework problems as a regular feature of this journal.

Problems submitted for publication should be documented according to the published "Standards for CACHE Computer Programs" (September 1971). That document is available now through the CACHE representative in your department or from the CACHE Computer Problems Editor. Because of space limitations, problems should normally be limited to twelve pages total; either typed double-spaced or actual computer listings. A problem exceeding this limit will be considered. For such a problem the article will have to be extracted from the complete problem description. The procedure to distribute the total documentation may involve distribution at the cost of reproduction by the author.

Before a problem is accepted for publication it will pass through the following review steps:

1) Selection from among all the contributions an interesting problem by the CACHE Computer Problem Advisory Board
2) Documentation review (with revisions if necessary) to guarantee adherence to the "Standards for CACHE Computer Programs"
3) Program testing by running it on a minimum of three different computer systems.

Problems should be submitted to:

Dr. Gary Powers
Carnegie-Mellon University
Pittsburgh, Penn. 15213