Gray sees prof. shortage (Continued from page 1)

nearing students do not continue studying toward master's or doctoral degrees. Economic forces, including the high cost of education and the lucrative salaries offered by private industry to students with bachelor's degrees, have lowered the number of students who choose advanced study.

"For [MIT], it's a problem," Gray noted, though MIT's "vacancy rate" hovers at two to three percent. Other academic departments in this region have vacancy rates as high as 20 to 30 percent. For instance, an engineering department at Northeastern University has 11 of 34 faculty positions vacant.

The faculty shortage is further compounded by the number of students electing to study engineering. "Engineering enrollments at MIT are at an all-time high," Gray observed.

"The vigor we have seen in the last few years for engineers... is likely to continue," Gray speculated. He predicted there will be no more wild swings in employment opportunities as there have been in the past.

On the other hand, as the demand for engineers continues, "secondary schools in the country are failing in the teaching of science and mathematics," Gray asserted. Only one high school in three offers more than one year of science and mathematics courses and only one in six high school students has studied more than one year of science and mathematics by the time he graduates.

"How can you live in the modern world and be a good citizen if you stopped with Algebra I and Biology?" Gray asked.

MIT research spawns corporation

By Joel Gluck

A company formed by eight MIT chemical engineers is selling a computer program to assist in the design and evaluation of processing plants.

ASPEN Technology, Inc., formed in August 1981, sells its program—ASPEN-PLUS—to builders of petroleum refineries, chemical plants, and paper or mineral processing installations.

The original Advanced System for Process Engineering (AS-PEN) software was developed at MIT with funding from the US Department of Energy. The program was developed to simulate steady-state chemical processes. ASPEN-PLUS, the enhanced version of the program, includes program updates and is sold to companies for $50,000 per year.

A customer using the system can typically save "millions of dollars," according to Dr. Lawrence Evans, president of ASPEN Technology. The program, he said, can speed the design of new plants, or evaluate those already in operation. The savings in energy use and efficiency may be "several percent," Evans claimed, translating into great monetary savings.

A California-based company, Simulation Sciences, markets a program called PROCESS, which performs functions similar to ASPEN-PLUS. Although Simulation Sciences is an older, well-established company, Dr. Evans feels "ASPEN is a more powerful, flexible system." A company can tailor the program to suit its own needs and can implement its own models, he said.

Major users of ASPEN-PLUS include Gulf & Western, Sohio, Eastman Kodak, Dow Chemical, Petro Canada, and Union Carbide.

Although ASPEN technology has been a successful enterprise, Dr. Evans feels that "things are going too slow" and suspects that this is an effect of the adverse state of the economy.

ASPEN hopes to develop a dynamic process simulator to examine not only steady-state processes, but also analyze start-up, shutdown, and emergency operation.

Currently, ASPEN-PLUS runs on IBM, Univac, and DEC VAX systems.