

Career Day set for Saturday

The routine of a home football weekend at Texas A&M will be interrupted Saturday when 5,000 to 8,000 high school and junior college students visit Career Day '82.

Career Day is an opportunity for students, parents and counselors to visit the campus and learn about career opportunities available at Texas A&M, said Elaine Saunders, assistant director of the Office of School Relations.

Career Day is on a football weekend to get the people here, she said.

Career Day, sponsored by the Office of School Relations, is a campus-wide activity that in-

cludes organized tours, presentations and open houses. Informal tours of the campus start at the Rudder Information Desk if requested.

Exhibits will be in the Academic and Agency Building, Hal-bouty Geosciences Building, Heldenfels Hall, Langford Architecture Center, O&M Building, Veterinary Medicine Complex and Zachry Engineering Center from 10 a.m. to 3 p.m. Faculty and students will be available from each department to answer questions and show people around.

Football tickets to the Texas A&M-Louisiana Tech can be bought for \$3.



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Federal aid down; contributions up

by Michael Larkin
Battalion Reporter

Although federal student financial aid has declined in recent years, private contributions have helped keep scholarships at Texas A&M University on the upswing, Dr. William McFarland, director of student financial aid, said.

McFarland said former students have been most cooperative in trying to shoulder some of the burden federal cutbacks have caused.

Still, 1,000 fewer students are receiving financial aid this year than two years ago.

Although 12,000 students received aid in the 1980-1981 school year, only 11,000 students will this year, McFarland said.

This decrease not only reflects the cutback in aid, but also a change in philosophy concerning the requirements for aid, McFarland said.

"There have been some re-

ductions. Most of the changes, however, reflect an effort to return the aid programs to their original purpose, which was to help students cover the cost of a college education—not to carry the whole burden," says a U.S. Department of Education circular which has been released recently.

This is a reversal of the liberal view of financial aid that was prevalent during the 1960's and 1970's, McFarland said.

McFarland cited these figures:

— In 1980-1981, \$23 million was available for loans or grants, but only \$15 million will be available this year.

— The federal share of that aid in 1980-1981 was \$16.5 million, but this year's total is expected to be only \$8.2 million.

— Local donations have increased from \$4 million in

1980-1981 to about \$5 million in 1982-1983.

But the \$8.2 million of federal aid is an optimistic figure because it is tentative. Until Congress approves the figure, the University can use only half of that sum.

Exceptions to that are the National Direct Student Loans and the Pell Grants. Currently, the University can finance the N.D.S.L. loans with money it has collected from repayments of previous N.D.S.L. loans. This amounts to \$30,000, McFarland said.

The \$2.5 million in Pell Grants was unaffected. But Congress is thinking of eliminating the Pell Grant in the 1983-1984 year, he said.

Because Congress might not decide 1982-83 figures until November, applications for aid in the upcoming year will be delayed by one month, McFarland said.

Hydrogen project receives \$60,000

by Carole Craft
Battalion Reporter

The Texas A&M Department of Chemistry has received a \$60,000 grant from the National Science Foundation to build a hydrogen research center in the basement of the Chemistry Building by April.

Bill Craven, proposed general manager of the center, said the center has not yet received University approval, but he said he is confident it will. The center will be used by a hydrogen research group which formed at Texas A&M in 1980.

The research will deal with the three main problem areas of

hydrogen: production, transportation and storage.

The problem with hydrogen production is basically financial, Craven said. Hydrogen is inexpensively made from natural gas, but the price has to be brought down on the production of hydrogen from water.

Transporting hydrogen is hard because hydrogen can easily crack pipes and containers, Craven said. The hydrogen molecule is so small that it can work its way between the molecules of the container and break its bond.

Michael Coad, chemistry department research assistant, said

storage is a problem because hydrogen takes up a lot of room but contains little energy. The hydrogen must be compressed and stored in organic liquids or in a metal hydride, which is similar to a sponge. Hydrogen is flammable and also must be stored away from sparks or extreme heat.

The many uses for hydrogen make this type of research important, Craven said. The main use for hydrogen is making ammonia for fertilizer. Hydrogen also is used as a natural preservative for foods and is used in the glass and steel industries to rid the products of impurities.

But hydrogen also can be used to fuel cars.

Dr. Robert Zweig, president of the Clean Fuel Institute in Riverside, Calif. was on campus Sept. 16 with his hydrogen-powered car. He said air pollution in some California cities has been reduced by replacing fossil fuels with hydrogen.

When hydrogen is burned, steam is given off instead of carbon monoxide and dissipates into the atmosphere. Hydrogen is used in aerospace projects to fuel rockets.

Craven said as the center expands in size, the petroleum and chemical engineering departments also will be able to conduct research that deals with hydrogen.

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