What We Need In 1966!

The propeller held by Mary Jo Hurley, Margaret McDonald, Gloria Cooper (left to right) from Daytona Beach Junior College is the trophy we forfeited to the Scots of the Junior College, when the Bandits lost the intramural touch football game in November.

This trophy will stay with DBJC until November of this year, when our intramural championship team will again meet with their championship team to take possession of the trophy. WE HOPE!

The trophy will be presented to the winning team each year. So all you football players get into training for this fall we want the trophy. WE WANT THE TROPHY!! WE WANT...
Here are the elected representatives to the student council:

First trimester: JOHNNY SINCLAIR, CALVIN BETZ
Second trimester: DARL EASTON, ALAN MITTELSTAEDT
Sixth trimester: DAN CHALL, GRAHAM JOHNS

AAP
SL -II: CHRISTOPHER THOMPSON, DONALD URQUARTE
SL -I2: WILLIAM HINEGARDNER, CHRIS ROLLENDORPER
SL -I3: no interest
SL -I4: BRUCE LOS, BRUCE POOP
SL -I5: GUNNER RALEBO, JONATHAN MURDASH
SL -I7-I8: WILLIAM ARTHUR, JOHN TURNER

Our congratulations to the new representatives. It is an honor and responsibility to serve on the Student Government of Embry-Riddle Aeronautical Institute. Your support and council will strengthen this organization for the betterment of the school and the students.

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ROBERT D. WILLMAN, Pres.
Chapter Epsilon Rho, Alpha Eta Rho wishes to extend to all returning students, new students, and faculty a hardy hello and welcome back.

Now that we've fattened up over the vacation we are prepared for the kill. Let's make it a successful and rewarding trimester.

We are looking forward in seeing all those interested in pledging this trimester at our rush party January 22.

DAN O'HALL

SIGMA PHI DELTA

Our Fraternity is presently negotiating the rental of the Travis Estate located at 558 Riverside Drive, Holly Hill. After spending five months at the Royal Hawaiian Hotel, we all anxiously await moving back into a house. Shortly after placing an advertisement in the "News Journal", we received a multitude of calls from people who felt their home would serve very well as a fraternity house. In most cases, their idea of suitability and ours were quite different. At this time, all but several of the homes have been ruled out. It is hoped that our housing problem will be solved very shortly.

Our last pledge period was plagued by the withdrawal of a number of pledges. Out of a rather large pledge class, we have two very fine men who have shown strong interest in both fraternity and their academic subjects. They will long remember the rigors of "Hell Night" and now, just await their initiation, January 29, before they become brothers of Sigma Phi Delta Fraternity. These men are Bernard Roke and Joseph R. Nawrocki. An initiation banquet will be held that evening in honor of our new brothers.

In the very near future we plan a rush party. A notice giving all the pertinent details will be placed on the bulletin board. All interested engineering students are urged to attend.

Lincoln Griffiths
The primary purpose of the Student Store is to provide our students with the required textbooks, supplies, and equipment. However, this store is not for students only. We have many extra "little goodies" that may appeal to Staff & Faculty members as well as our students. For instance, there are 7, 8, and 4 band radios that monitor aircraft broadcasts as well as standard AM broadcasts. Listen to our Embry-Riddle student pilots converse with the control tower. Don't fail to see our new item, a 6" square all-weather umbrella. Any more items such as Pennants, Sweatshirts, Nightshirts, Cigarette Lighters and the beer (hot chocolate?) mug, all with our school crest. We will be getting in soon, some jewelry type items with our school crest.

Come in and browse around and meet Mildred, our congenial saleslady, a treat in itself.

Jack Deitler
Purchasing Agent

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The Design Engineer

A practicing engineer calls upon his knowledge of the basic principles, methods, and ideas of engineering in performing the major function of his profession: the design function.

Design is a synthetic process which brings together materials, methods, principles, and other resources to produce plans for an economical engineering product. It may be diesel turbine, electric motor, space vehicle or electric iron. This is the essence of the work done by the engineer in practice. The word "design", in its broadest sense, applies to the "creative genius" of all engineers rather than the more popular association of the word with the drawing board, pencil and paper; whether they be used for calculating, sketching or precise drafting, they are simply aids to the design process which actually takes place in the mind and imagination of the engineer.

A good designer not only considers the design of a machine to perform a particular function satisfactorily, but he must also keep in mind the ease of maintenance and repair. He must realize the manufacturing problems as well as the cost involved at all stages of production. The machine must be durable, safe, and appealing to the eye.

The capacity to design includes more than mere technical competence. It involves the willingness to attack a situation never seen or studied before of which data is often incomplete. It also includes a full acceptance of responsibility for solving the problem on a professional basis.

What is involved in a design? One of the best ways to answer this is to take an example everyone is familiar with, the electric oscillating fan. Most people take such a fan for granted without realizing the tremendous amount of time and effort which goes into the designing process.

The principal elements of the fan are the motor, which is the local source of energy for operation, and the fan blade assembly. The theory which must be used requires a knowledge of electricity and magnetism, fluid dynamics, mechanisms, and heat transfer. The motor, which consists of essentially two parts: a stationary field and a rotating armature, must be designed in order to have so many coils of wire of a certain size (in circular mils), to deliver so much power at a certain speed of rotation, a certain amperage and at a standard voltage. It should be designed so that it does not get too hot and burn the insulation surrounding the wire or burn a human body. In spite of the fact that such motors are available to the fan manufacturer one must not forget that they had to be designed by the engineer in the first place.
The fan blades must be given a certain size, shape, and pitch. They should move so many cubic feet of air per minute at the operating speed of the motor. Perhaps one does not realize the complexity of this problem at first hand. On taking a closer look one soon realizes that this is a three dimension flow problem in fluid mechanics, as the fan is in the open rather than in a duct, where the flow would be essentially from one direction making the problem less complicated.

The motor housing must be streamlined for better aerodynamic flow. One is apt to say why not use the air flowing over the motor housing to cool the motor? This would tend to defeat the purpose of the fan which is to circulate air for cooling purposes. If the motor heats the air it is less effective for the fan's purpose. Here is a healthy problem in heat transfer as well as aerodynamics.

These are not the only considerations involved in streamlining. The designer must also consider where in the motor housing he should place the reduction gearing so it won't interfere with the air flow. He also has to design a suitable linkage between the pedestal and the motor which will permit oscillation of the fan blades within the required amount of degrees. A design engineer would make an arbitrary decision based upon his judgment, experience and imagination.

The designer must make the fan safe and appealing to the eye. There are many more factors that the designer has to consider, for instance, availability of materials, methods of fabrication, and ways of packing and shipping. A designer must always be cost conscious. There is a popular saying among engineers that integral (∫) and dollar ($) signs go hand in hand.

From the few factors considered in the design of a relatively simple item one can easily imagine the resources a practicing design engineer must call upon.
Skirts to Battle

Everyday I see at least one young man whose forehead is drawn up in a permanent frown because he is worried about the draft.

Weep no more laddie! All you have to do is convince your congressmen that the women of these United States should do the fighting for a change.

Just picture it. Thousands of women swinging, oh pardon me, marching off to do their bit against the Viet Cong.

Look, there's Mabel now bringing her helicopter down to a perfect landing. All out girls but watch that first step. It's a whopper. And you might get a runner.

Now for a bit of typical conversation.

SGT. "All right you bunch of lazy dames, get your fannies out of those foxholes and beat the bushes for the enemy."

PVT. SALLY "Just a minute Sarge, I haven't finished lining my eyes yet."

But take a second look. All men, at least the men that are married, know that there is nothing as hard to defeat as a woman. That so-called weaker sex is known to be the most brutal and violent when challenged about anything. It might not be such a bad idea at that!

By Hazel Sharif
I hear drinking on the job is O.K., but not passing the bottle will get you the ax. Specially if you have big feet.

Inside Fun

By the way, did you notice that the city gave our mosquito-breeding ground over at the municipal airport building a concrete surrounding. Don't you think that will keep them in?

Buzz-Buzz

You don't have to run from first to second floor any more to utilize the library. Instead we now have a Phy.-Ed course offered.

Hud, two, three

Ego & super-ego did not exercise much control at the past JETSTREAM; going away Allen Betz, boost your morals party.

Oh what fun!

Enough criticism - but it is a shame that we only have room for bulletin boards in our main building lobby, so that our former lobby mural by Alto Cumulus had to be "forced" into Mr. Mansfield's office.

Tsk, Tsk, Tsk
The Embry-Riddle soccer team went down to its first defeat of the season on January 16, at the hands of the Bruno Spyders. The Spyders, a semi-professional team from Jacksonville, combined organization and stamina to beat Riddle 4-0. The Embry-Riddle team played a defensive game and had trouble feeding the ball to its front line.

In another game the 'Eagles' were also defeated by a semi-professional team. This loss, to the Orange Soccer Club of Orlando, brings our record to two wins (Rollins and St. Leo's) and two losses. Goals were scored by Winston Mahabir, Daryl Paul and Victor Spence. It was Paul's first goal of the season.

These two losses will be redeemed January 29 and 30, when Riddle is scheduled to compete in a six team match in Winter Park, Florida. Embry Riddle will be the only college team matching skills against five other semi-professional teams. Watch the bulletin board for announcement of exact time and place.

FLASH:

To all students interested in playing basketball, or tennis, come to the next student council meeting.

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**VOTE FOR**

**A LEADER**

**BILL BOWN** for

**PRESIDENT**

of the

Embry-Riddle Student Government

This candidate is endorsed by the JETSHEAL!
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24 Hr. CONTINENTAL RACE

DAYTONA BEACH, FLA. . . . .Four factory Fords, all of them 1966 Mark II prototypes powered with 7010 CC engines, have been entered in the Daytona 24 Hour Continental track-road race at Daytona International Speedway on Feb. 5-6.

Three were entered by Shelby American of California and one by Holman-Moody of Charlotte, N.C.

The Mark II prototypes, capable of well over 200 miles per hour, will be handled by eight of the finest sports car drivers in the world.

In Shelby America's No. 1 car will be the brilliant New Zealand Grand Prix team of Bruce McLaren and Chris Amon. In the No. 2 car the partners for America's longest test of speed and endurance will be the California internationalist, Dan Gurney and Jerry Grant, and the third will be co-driven by Ken Miles and Lloyd Ruby, winners of the 1965 Continental when it was run at 2000 kilometers.

The Holman-Moody Mark II will be handled by a pair of New Jerseyites, Walt Hansgen and Mark Donohue.

These four Ford prototypes, which will make their racing debut in the Continental and go on to battle in the world's only other 24 hour race for sports, sports prototype and GT cars, the 24 Hours of Le Mans, assure Ford of formidable representation against the challenge of Italy's Ferrari, Germany's Porsche, the Chaparral of Texas, and all the world's other fast makes.

A Chaparral II, successor to the Chaparral which swept the boards in road racing in this country last year, has been named for the Continental by Jim Hall. It, too, will be making its 1966 start, and will be co-driven by Jo Bonnier of Switzerland and Phil Hill, former world champion, of California.

The Daytona 24 Hour Continental carries $52,000 in posted awards, making it the richest road-track race in the world, and is worth high points toward the manufacturers' world championship. It will have a 3:00 p.m. start on Saturday, Feb. 5, and be run over the Speedway's 3.81-mile track-road circuit, which combines the high-banked turns and long straights of the Speedway proper with the winding infield road.
KNOW YOUR INSTRUCTORS

MR. KENNETH WANG

I was born in Luho, Kiangsu, China, and received my Bachelor of Science degree from the Chinese National Northwestern College of Engineering with a major in Aeronautical Engineering.

After graduation, I served in the Chinese Air Force, advancing to Lieutenant Colonel with assignments in aircraft maintenance, design, inspection and teaching.

I had taught engine dynamics, thermodynamics, applied mechanics, aero-engine and automobile maintenance about four years at both the Chinese Air Force Technical School and Transportation School of combined forces.

During the service, I also taught in the night school of Taiwan Provincial Taipei Institute of Technology as a visiting instructor of mathematics from 1954 to 1960.

In 1953, I graduated from the U.S. Ordnance School at Aberdeen Proving Ground, Maryland, majoring in ground equipment maintenance. In 1956, I was promoted to the Chief of the Aircraft Maintenance Section, Headquarters of the Chinese Air Force, and received an honorable discharge by request in 1960.

After my discharge, I taught college physics at the day school of Taiwan Provincial Taipei Institute of Technology as Associate Professor. (In China, we do not have Assistant Professors).

In 1962, I was rewarded assistantship from West Virginia University as research assistant in the Department of Aerospace Engineering, and received my Masters degree of Science in 1964, then continuing for my Ph.D. at the University of Illinois. This summer, West Virginia offered me an assistantship for my Ph.D. program, also the University of Illinois awarded me one year tuition waiver. For the sake of my family and my children, I came to this school. I would like to dedicate myself in teaching for this school.

This concerns you the student so lets

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The local businesses supply 50% of the financial support of this paper. To keep them happy keep's you happy.