Aeronautics Offers Star-Studded Systems Engineering Course

by Paul Levin

Systems Engineering will be the topic of a "new" course, Aeronautics 241, next term. Open to all students, the course will be taught by Dr. Ralph Miller, Visiting Professor of Aeronautics and Environmental Engineering.

What makes this course truly unique is the seminar series around which the course is taught. Each week will be an expert in the field. Dr. Simon Ramo, Caltech alumnus and Trustee and Vice Chairman of the Board of TRW Incorporated (and for whom Ramo Auditorium is named), will speak at the first session, Tuesday evening March 31 in Ramo Auditorium.

Dr. Miller stated that there are no requirements for eligibility, but members who desire to receive funds from ASCIT are required to decide whether or not it will curtail their membership in the library. Members will also be entitled to listen to any of the library's records on the YMCA stereo system, or check albums out at a daily charge of 10 to 50 cents per record. Members will also be able to obtain records for their own collections at wholesale prices through the library.

The library is non-profit and self-supporting; all dues and fees will be used to buy more records. These will be purchased according to the member's suggestions and wishes. To help start the library off, ASCIT and GSC have donated $280 to buy records.

Vista Information Available

Dr. Donald S. Clark, Director of Placements, announced yesterday that complete information about, and information for, Volunteers in Service to America (VISTA) is now available at the Student Information Center (23 Throop).

VISTA is holding a recruiting program which will last through March 19th. The organization offers the advantage of doing some actual good, working with the nation's disadvantaged for a year. Volunteers receive living expenses and an additional $50 per month, paid at the end of service.

Dr. Clark stated that there were no requirements for eligibility, but said that persons under 20 usually were not considered qualified.

BOD Accepting Third Term Budget Requests

The recently elected ASCIT BOD will meet for a budget-planning session during the first week of third term. The purpose of the session will be to adopt a budget for the new fiscal year, from March 1, 1971 until February 29, 1972.

All clubs, organizations and BOD members who desire to receive funds from ASCIT are required to submit a budget request to the treasurers, Tom Matso, in case of Page House, by Monday, March 29.

Greater consideration will be given to those requests which are accompanied by tentative budgets which outline the need for ASCIT money.

At the meeting, the BOD will decide whether or not it will curtail funds to clubs in order to place more emphasis on other areas, e.g., increased funds for house activities.

Eat It Dig Department

Closed for Finals

The Caltech Coffeehouse will be closed starting Sunday, March 14, for the duration of finals week and spring vacation. It will be open for third term starting Registration Day, according to the managers.

Applications for Resident Associates Being Accepted

Dr. David Smith, Master of Student Houses, announced that applications for the positions of Resident Associates in the undergraduate student houses for next year. Faculty and graduate students, married or single, may apply. All interested parties should contact Dr. Smith at the office of the Master of Student Houses on the Olive Walk by Lloyd House before March 20. The extension time is 2:194.

Earth Day

Victim of Apathy

We have received the following communication: "OBITUARY - Earth Day, 1971. Age: 1, of Caltech, Pasadena, passed away March 4, 1971. Cause of death: Apathy. Was beloved child of Ecology Movements World Wide and CEAC. "Memorial services have not been requested as yet."

Kitchen Chemistry

Speaking to a mixed audience in Winnett Lounge yesterday, Mrs. Marjorie Cueny, a former Caltech student, described her life as a chemist and household as part of the Women in Science Series sponsored by the Caltech Y.

-Photo by Fish
**Guest Editorial**

**Continued Rapport Urged**

Dear Mr. Suber,

We regret the loss of Ken Charles to the Security Force. We feel that officers such as Ken and Russ Thyret have done much to improve and maintain good student relations. It is heartening to note that this good relationship is being maintained by the remaining officers even through this period of change.

We are particularly interested in seeing that Ken's successor continues the trend set by the current security force. It is of the greatest importance that the new head of the force be a man who has as good a rapport with the student body as any of our present officers. Without the kind of concern for the students that presently exists, our security force would be much less effective than it is now. Our present officers are sociable, efficient and dedicated. Any candidate for Ken's position who does not meet or exceed our officers in all these qualities will be a poor choice, no matter how well qualified he may otherwise seem to be.

We would like to see any members of the student body who have comments about the present or future security force to express them at this time. We have always had (and still do have) good communications with the security force. Now is the time to exercise this rapport.

Sincerely,
John Stein
Phil Neches
Paul Levin

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**The Third Wing**

**Now You Have to Hate Them All**

by Nick Smith

For those of you who failed to notice, the U.S. Supreme Court made a major decision on Monday, and I don’t mean the one about “I Am Curious, Yellow.” By an 8-1 vote, the court ruled that proper interpretation of the Selective Service laws requires a conscientious objector to be opposed to all, repeat ALL wars, in order to be granted an I-A status.

The implications of this ruling are significant in that it will be even more difficult to get conscientious objector status. In addition, this new ruling stated that Congress could change the law such that specific wars could be objected to, if it so wished. The Justice Department did not like that last part, since people might start objecting to specific taxes, too.

Unfairly Worded?

The ruling is making it nearly impossible for Roman Catholics or Mohammedans and Muslims to gain CO status, since it is my understanding that both the Pope and Mohammed condone fighting in just or holy wars. If you look at the history of both churches, just or holy wars have included some impressively imperialistic land-grabs, but that is not the point. The new ruling states (in effect) that you would be morally able to defend the United States from attack, you must also be willing to conquer on behalf of the President. Does that sound unfairly worded? Well, it’s not. For example, just suppose the United States got itself into a combat situation (not even necessarily a war) and the President sent in troops in such a way that the United States was clearly in the wrong. (That isn’t too far fetched, since it was done to Mexico, Cuba, Spain, the Philippines, and others at different times in American History.) THIS NEW RULING STATES THAT YOU COULD NOT REFUSE TO SERVE IN THAT SPECIFIC CONQUEST!

Either Way

It makes a farce of the various war trials held at the end of World War Two, since the new ruling basically says “You must serve, even if you think your country is in the wrong. However, if it really was in the wrong you’d better be able to prove you hated every minute of it.”

This leads to interesting twists on future My Lais, since the Army can get you for disobeying an improper order as well as for obeying it. If Lt. D. G. really was ordered to kill the civilians at My Lai, he was “hated” either way, because disobeying a direct order in combat is a serious offense.

**Rematch**

It is interesting to note that this ruling was made only hours before the All-Frazier fight, since it directly affects Mohammed Ali’s court appeal of his draft case as a Muslim CO. The rematch may have to be held again.

Honest conscientious objectors are going to have to undergo a large amount of soul searching to determine if they really oppose all wars. Others must figure ways to convince their draft boards that they oppose all wars. In either case, the court ruling makes things a little harder. I just wish Congress could be convinced not to renew the draft at all—but then I was always an incurable optimist.

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**The Ies of March**

**Beware the Ides of March, for evil times are upon us.**

Food is terrible. The middle east seems on the verge of starvation. And most terrible of all, finals are coming.

Oh woe, ill begotten earth, for dark days are upon us. And most terrible of all, finals are coming.

Worried

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**Throop Beat**

**Freshman Reassessment?**

A freshman reassessment session may be held early next term according to our sources. The program will include freshmen, upperclassmen, and faculty, and presumably would cover topics as the relative merits of on-campus freshman orientation as compared to the traditional freshman camp in the mountains.

The program is being revised (we are told that a sort of freshman reassessment session used to be held traditionally every term) largely through the efforts of the YMCA. We will bring you more details as they become available.

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continued from page two
Since the Admissions Committee gets into high gear in the weeks to come, any inputs on what sort of class size we want had better be soon...Reportedly, the Browns will be in Vienna starting this weekend for the next round of the SALT.

Ask Not What Your Dean...So far, only a very few students have expressed serious interest in the newly-organized informal exchanges program according to Dr. Huttenback. If you have any interest in taking between a term and a year away from Tech, see Dr. Huttenback about this program soon.

The Genial Dean will shortly abandon his residence at Arden House for greener pastures a half-mile east. Dr. Huttenback has plans for a house-warming party half-mile trek. We are checking into plans for a house-warming party sometime early third term, but many sweet fringe benefits.

...to a tranquil serious feeling which Harrison arrangement.

Johnny Mathis sings from his listener. Johnny gives the his version of "My Sweet Lord" is a poor attempt at copying the Harrison arrangement.

Johnny Mathis, Warner Bros., WS 1890 Little Feat play the coming style Little Feat play the coming style of music that is found on progressive rock radio stations, such as local rock station KPPC. At least one of their songs, "Hamburger Midnight," has reportedly been played in the soup. The group is definitely known for traditional ballads or the performa.; the first part of this is usually similar to that of Mungo Jerry, Marc Bolan and Mickey Finn the album is of fine quality that "straights" as well as "freaks" may enjoy having a copy.

CRUEL SISTER, Pentangle, 6430

Little Feat Brass Boz, WS 1890

The tape has sounds that would have been extremely popular in the mid-sixties. Unfortunately it is now 1971 and this album tends to sound more like a New York City subway ride than a musical masterpiece. I would recommend this album only to those who don't see progression as "hexadecimal," or base-16 numbers where the digits have

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Take it From the Top

Dr. Beadle rejoins Caltech

by Phil Neches and Paul Levin

Most of the members of Caltech’s Board of Trustees come from the world of business and industry. However, in the past few years, the Board has diversified its membership to include figures from government, education, and even science.

Dr. George W. Beadle, the subject of this interview, brings several unique qualifications to his position as a trustee. He is a scientist, and won the Nobel Prize in Physiology and Medicine in 1958 for his efforts. He was Chairman of the Division of Biology, and a professor here for many years. He is, except for Harold Brown, the only trustee who has been a president of a university.

Born in Nebraska, in 1903, Dr. Beadle holds a BS from the University of Nebraska and a PhD from Cornell, as well as numerous honorary degrees. He is a member of the National Academy of Sciences, the American Philosophical Society, the Genetics Society of America, and on the Advisory Panel to the Dreyfus Foundation. He has been a trustee since November of 1969.

He has been president of the University of Chicago, and recently retired as Director of the Institute for Biomedical Research of the American Medical Association. He still lives in Chicago, near the University.

Considering his long experience with Caltech, we started by asking him what it was like to be here back in the Institute’s early years.

BEADLE: The Athenaeum was here then, and groups of young people, postdoctorates and some graduate students, used to get together there and play penny poker, which was a very good change from normal work and study. Then often a number of us would go over to the old High Voltage Lab. At that time, maybe 1913, or shortly thereafter, Charles Lauritzen, Tom Lauritzen’s father, was building the first million volt X-ray tube. It was in the basement, and went clear to the top of the building.

It was made with glass gas station tubes, the kind through which you could see the gas flow. He got those in various sizes and sealed them up, and thus made a giant X-ray tube, used initially in cancer research.

The boys would work nights over there. A number of us would go over there and sit around, watch what they were doing, generally gosh, and usually have coffee. It was a great mixture, mathematicians, biologists, physicists, engineers—so as I say, it was a pretty exciting place for a young fellow—as I think Caltech still is.

TECH: Is Caltech still as “exciting”?

BEADLE: Maybe more exciting, but larger, and a little less informal, just because it is larger.

TECH: What was the most exciting thing for you personally during those years?

BEADLE: I guess the most exciting thing in my life was initiated when Boris Ephrussi—who was originally Russian but lived during the revolution and went to Paris—came here to work in biology as a postdoctoral fellow. He was an embryologist-tissue culture biologist.

In those days we spent a lot of time talking about what genes do in development. We knew about genes in the formal sense of transmission, but nobody knew what they were or how they acted in development. It was obvious to us that the reason for this was simple, that organisms geneticists used at that time, corn and Drosophila, were organisms about which development was not understood. For example, the fly undergoes metamorphosis from larva to adult, which is a complicated business. We decided that what was needed was either to study a continuous process, not a step-by-step event, or, alternatively, to study an organism that was simple enough to be studied, say by embryologists, or, alternatively, to take an organism with known development which we could study. We decided upon Drosophila, the fruit fly.

Dr. Ephrussi, with the help of the Institute (and I always assumed that this was Dr. Morgan’s personal financial support) I was given leave of absence to go to Paris to work with Ephrussi. There we developed the methods of transplantation of embryonic buds in Drosophila larvae. As a result we were able to work out the relations of specific genes to specific chemical events. We didn’t know the chemistry of the events, but we knew that they were chemical transformations in the formation of pigment. In our minds, this was the beginning of the concept of the specific relations of genes to specific chemical reactions by way of controlling enzymes.

TECH: You didn’t know at the time that back at the turn of the century, an English physician and biochemist named Garrod had worked out similar relations in man, particularly with the disease alcaptonuria. On that basis, he postulated the relationship between genes and what he called ferments (enzymes). He used this disease, a genetic block, as a biochemical tool. For its time this was remarkable, but like many other discoveries, especially in the early days, people didn’t appreciate it. It was some forty years later when we did; we therefore did not realize that we had only rediscovered a relation well known to Garrod.

Nevertheless, those were pretty exciting days for us.

TECH: It sounds as if you had a great deal of freedom in pursuing your research. How general is this freedom?

BEADLE: I recently read a speech by a fellow who explained that many of the social problems we now face are solvable—that we have the technology and the know-how to do it. If we would just devote our resources and our will to doing it. He emphasized the need for the confidence and the energy of the people who have the talent and the rigidity of the system. Suddenly, I realized that in my life I had never experienced these difficulties—that all of my life I had been academic.

In the academic world we don’t have the money, I think that’s something people don’t fully appreciate. You fellows don’t have to conform in dress; we didn’t forty years ago. Nobody told us what we had to do. It isn’t a system in which you have to do what you are expected of you, where you have to conform. Nobody checks on your hours, for example.

Although I suppose there were some kinds of conformity that were expected, I couldn’t help thinking that in the academic life we have everything that this fellow said we ought to have more generally. For the first time in my life I realized why I couldn’t understand some of the resulting problems. I’d never experienced them.

Of course this freedom is a characteristic of top institutions. Caltech is certainly an outstanding example of this kind of freedom, of this freedom to do what you want to do as long as you’re doing something sensible and reasonable. You’re allowed tremendous leeway in your way of going about it.

TECH: Where are the areas of biology in which we can expect most rapid progress?

BEADLE: I believe the directions...Continued on Page Six
Gare into the magic mirror and plot your entertainment for the time soon hence when finals have finally come and gone. Spring vacation season proves to be a prime time for diversions, especially in the Los Angeles area.

Besides things to do in town, don’t forget skiing (although the main resorts are likely to be crowded), the beaches (sunny Southern California often warms up just for the term break), and, mainly, the greatest scenic beauty around (California girls). So with this in mind, here we go.

With the academy award ballot voting virtually completed, many films formerly sequestered in exclusive showings will go city-wide. Also, a number of last year’s winners have returned, so cinemas should prove interesting this vacation.

Broomer McCloed follows zanily in the footsteps of Mike Hammer. Both Robert Altman flicks are very funny and showing city-wide. Comedy fans will unite!

For the devotees of live theater, there’s a Girl Diary of a Mad Housewife, There’s a Girl Among Us, and 800 Little Big Men. Be warned—they can move you away then but return to that fair tale of a Mad Housewife.

Ahmanson March 16. This should provide a royal way to forget finals. Story Theater’s production of Odin’s Metamorphoses will close within about 10 days, and it will worth the effort to see. The Mark Taper Forum sells all of the remaining tickets in the house for $2.50 each to students (you must bring student i.d.) starting a half hour before curtain time.

The Huntington Hartford (1615 Vine St. in Hollywood) has Jack Weston in Neil Simon’s Last of the Red Hot Lovers, through April 5. Nearby, the Linley Opera House (Whittier at La Brea) has Fiddler on the Roof with Bob Carol as Tseyisque. Two Fiddler performances currently grace the stage of the L.A. theater scene. The blackest of Fiddler’s black comedies, The White House Murder Case, is currently running at the Century City Playhouse (10508 Pico Blvd) in West L.A. A few miles east, Fiddler’s, a revue based on his cartoon characters, is running at the Factory (622 Laperre Drive) in Beverly Hills.

1776 opens at the Pasadena Civic on March 23 for a two-week run. With this and many other productions listing multiple plays and ticket prices through each title, you can figure out the cover. The L.A. theater scene is heavy chromaticism. The word usually ‘joy’ the harmonics. However, Gesualdo’s genius soon becomes apparent, as do the musical implications, pointing the way for the late counterpointalists and for 19th century chromaticism.

Robert Craft, mainly known (at least to me) for his interpretations of modern music, is one of the leading proponents of the works of Gesualdo, having recorded Gesualdo’s music over a decade ago. The technical craftsmanship that he has always applied modern works is apparent in this recording. Under his direction, the Singers of Venice do a masterly job, at worst, sounding like a good barber shop quartet. At their best they bring Gesualdo’s music to its stylistic peak. He has moulded the music around the text, forcing it to fit the words, accenting their meanings. If the word is ‘joy,’ the music soars through the word. A stylistic Mannirist, his music does not flow freely. Each note is purposefully where it belongs.

One of the devices he used to obtain such exact musical expression is heavy chromaticism.

The above lyrics were written by Don Carlo Gesualdo, Prince of Venosa, in 1611 as part of his sixth, and final, book of madrigals. The late madrigal, highly popular in Europe in the late 16th century, is basically a fourural lyric poem. Gesualdo is primarily responsible for bringing the madrigal to its stylistic peak. He has moulded the music around the text, forcing it to fit the words, accenting their meanings. If the word is ‘joy,’ the music soars through the word. A stylistic Mannirist, his music does not flow freely. Each note is purposefully where it belongs.

One of the devices he used to obtain such exact musical expression is heavy chromaticism.

The ANAHEIM CONVENTION CENTER is featuring James Taylor, Carole King, and Jo Mama on March 21st, after having Merle Haggard and Bonnie Owens on the 20th.

The FORMID INglewood features Santana, Jose Feliciano and Tower of Power on March 23rd.

The MARK TAPER FORUM at the Music Center has the L.A. Chamber Orchestra in concert on Monday, the 15th.

Richie Havens is at the SANTA MONICA CIVIC on Sunday night, the 14th. Most of you have probably never heard of him, which is unfortunate for you.

The VALENTINE MUSIC THEATRE has Lifetime (featuring Jack Bruce) and PG&E on Friday the 12th. With the Ides of March almost upon us, there is a distinct Shakespearean flavour to the plays available to the public for the next few weeks.

BECKMAN AUDITORIUM, for example, has the play “Much Ado About Nothing” this Friday, the 12th. It required tremendous restraint not to use that fact as the basis for a joke.

The Cal State L.A. Arena Theatre, for another example, is offering “Twelfth Night” from (naturally) the 12th to the 14th. The same example is at the FFC LITTLE THEATRE (or whatever it’s called) where “As You Like It” is being performed March 18-20, and 25-27.

Last but definitely not least, the PASLA Community Players present “East of Jordan” at their Little Theatre at 8801 South Vermont in Los Angeles. (A most excellent play.)

SO DO SOMETHING!
Beadle Reminisces on Work
Continued from Page Four
Caltech is taking now are right down the line of the important areas in which we expect progress. Molecular biology is certainly moving very fast and is an area in which Caltech is extremely strong. Another area in which everyone agrees we are going to move rapidly is the behavioral sciences. Again Caltech is right out in front with a sound group on the biological side and with groups outside biology interested—and active. These two areas are moving rapidly, and I assume they’ll continue to do so for a long time.

TECH: Can you give us a specific example?

BEADLE: In the field of neurobiology, one of the big problems is how does the brain work. We store, rearrange, and retrieve information. We’re doing it now. This is a pretty remarkable feat. How is it done?

This is an area in which we want to know just for the sake of knowledge, that is one characteristic of man that makes him different from all other organisms, his ability to forget and to a farther extent than any other organism we know.

TECH: What of the social implications of this sort of research?

BEADLE: Of course the social implications are many. What goes on in the brain is obviously determined both genetically and environmentally. For many scientists, environmentally from the very early stages of development of the nervous system—just like the eye or ear—is set after birth. We’re now recognizing, for example, what a tremendous amount happens before the first exposure to an educational system.

This is certainly the basis of many of the social problems of our time. There are many persons who have had a limited kind of exposure of the nervous system during the first several years of life—a very poor cultural environment. We have tended to think that we want to get a youngster in school at five and straighten it all out. We now know that you can’t do that easily, that much is already set. We know this experimentally in animals; we are beginning to understand it in man.

Not only is this important fundamentally—scientifically—but in some ways it is even more important in its social applications. Exactly how we can make use of this knowledge we don’t know yet, but we know that we must have that knowledge if we’re going to do a better job of conditioning people in a desirable way. What the desirable way is, is of course itself a tough question.

TECH: What are your thoughts on what is “desirable”?

BEADLE: Genetic evolution—biological evolution—depends on diversity. You can’t have evolution without it. If everybody were alike genetically you wouldn’t have change except by mutation, which is a very slow process. With genetic diversity, you can not only have change, but the diversity itself is important. In man we don’t want everyone to be alike. We want and need variety.

What can I do with this new knowledge of genetics? Some things are obviously desirable. We would like to minimize genetic defects, for example. But even that isn’t the simplest problem in the world because there is some evidence that some of these conditions in the heterogeneous state—in the carrier condition—confers advantage. Heterozygocity in a cross-breeding, cross fertilizing organism can in itself be an advantage. We strongly suspect that some genetic defects in man, such as cystic fibrosis, confer an advantage in the carrier condition. The reason we believe that is that something like one in twenty of us is a carrier. That means that in one in four hundred couples, both parties will be carriers, and one in 1600 children will be affected and essentially eliminated by natural selection. To counterbalance this elimination there must be mutation in this gene at a pretty good clip. Mutation to counterbalance this elimination would be at such a high level that many of us believe that there must be another explanation, for example, that reproductively the carriers have a selective advantage.

Thus if you eliminate the defective gene, you also eliminate the selective advantage of the carrier. Well, that is hypothesis, we don’t know it for a fact. However, we do know that organisms like corn, that are normally cross-fertilized and in fact do out-cross much as in man, close in-breeding invariably leads to a reduction in vigor. You�� it by hybridizing inbred strains. That’s the basis of hybrid corn, which produces a large part of the food the world today. No one has ever obtained a pure strain as good as one of these hybrids.

One could make a good guess that this is also true in man. Thus if you make a man homozygous for all of the good genes you might imagine, he’d probably be a pretty perfect creature. That’s only one of the difficulties. Another is who determines in what direction do you make the change? Obviously we can eliminate some genetic types in our population, and we have. The Tasmanians, for example, no longer exist. Was that good, or was it not?—we can never know.

Thus in the absence of much more knowledge than we now have, it’s pretty risky to deliberately intervene in ways that decrease or significantly alter the genetic content of our human population. Until we know a tremendous amount more, I believe it is best to preserve the diversity that we have. This means that all of the segments of the population, from a genetic point of view, might behave differently, at least until we learn much more than we now know.

Of course in actual fact that doesn’t happen. We are changing as a species, and we have no way of knowing whether the change is for the good or not.

What I have said about biological inheritance in some ways also applies to cultural inheritance. We transmit cultural inheritance from generation to generation through the nervous system and the social systems. Great cultural diversity, and this makes the world from our point of view a most interesting place. If we were all alike culturally and genetically, life would be much more monotonous.

We need many kinds of people genetically; we need many kinds of people culturally. I say let’s keep it that way.

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Upon presentation of Caltech ID.
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SUNDAY —Love Dance with Jicky and Bobby
MONDAY —All amateur talent show
TUESDAY —Toni Felice
WEDNESDAY —New show—Adrienne’s Space Odyssey Show
THURSDAY —Adrienne in the Vibrating Bed Show
FRIDAY —Lunch—New male & female nude dance
SATURDAY —New act—Sadie: the Complete Sex Symbol, a bottomless dancer
Topway

THE CALIFORNIA TECH Thursday, March 11, 1971
Track Team Beats Harvey-Mudd
by Martin T. Smith
Despite being handicapped by the absence of three distance runners, Caltech’s track team won a past Claremont-Harvey Mudd at Tournament Park last Saturday 74-41. The meet began well with the Beavers winning the 4 x 110 yard relay, but was undecided until the final event, as freshman Al Kleinsasser hit the finish line in first for the 100 yard dash. Kleinsasser’s earlier victories came in the mile (4:30:3) and in the half-mile (1:59:8).
Gary Stormo managed three outs, running 10.3 in the 100-yard dash, 23.9 in the 220, and in a key leap for the last mile, in triple jump 44 ft. 5¼ inches. Dave Holmes won the pole vault at 10 ft., Steve Watkins won a very close quarter mile in 52.8, and Charlie Almquist won the intermediate hurdles in 58.3.
With only the mile relay remaining, the Beavers trailed 69-71. C. J. M.

Cover charge reduced to $50 from 7 p.m. to 12 midnight with Caltech student, faculty, alumni, or employee identification card.

then tried a psycho by running their best runners first, but the track failed as Jeff Hurlin, Almquist, and Watkins kept up the chase, leaving Kleinsasser an apparently easy task when they ran out of quarter miles one man too soon.

On the previous Wednesday, the Caltech trackmen had opened their dual meet season, traveling to Redlands and losing 100-44.

This Saturday, Caltech hosts Pomona in a conference battle which will be stronger than the Claremont-Harvey Mudd meet, but the Beavers are hoping to put up a somewhat stronger effort. Next Wednesday, Caltech visits Occidental, the conference track powerhouse, in the final meet of second term.

One minor note: There is some confusion as to what the Caltech three-mile record really is, especially as there is no listing in the “Little T” or on the record board in the gym (in the men’s locker room). Most likely the record should properly belong to Peter N. Cross (1967), whose one-mile and two-mile records still stand. Although the records have not yet been searched, it appears his best time was no worse than 14.53.

continued from page one
elimination of the $100 fee.
You’d better take advantage of this coupon. For most of you it will probably be your last chance to have a 200-level aeronautics course added to your transcript!
### Academic Calendar

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**General Registration First Day of Classes**

**Mid-Term Deficiency Notices Due - 9:00 am**

**Last Day to Add Courses Completes and Change Sections**

**Examinations for removal of conditions and incompletes.**

**Exams for admission to upperclass status '71-'72**

**Midterm Week...Sigh!**

**Last Day to Drop Classes**

**Exams for admission to upperclass status '71-'72**

**Mid-Term Deficiency Last Day to Drop Classes**

**Final Examinations for Seniors and Grad Students End**

**Final Grade Reports Due Tuesday After Class Day**
Swimmers Place Fourth in SCIAC Meet

by Bob Kieckhefer

In the SCIAC All-Conference swimming meet, held in balmy weather at Pomona last week, Caltech swimmers narrowly missed placing third, as some upset victories allowed Redlands to outscore them by eleven points.

In the diving events, held last Thursday, Tech divers fared poorly in the tough competition. Greg Beall missed his bid for second place off the 1-meter board by 0.30 points, and Caltech was awarded the third-place finish in the 200-yard backstroke in 2:13.1.

Jim Jakway was the only other Tech medal-winner, as he placed fifth in the 200-yard individual medley. He also placed fifth in the 200-yard butterfly. He also placed fifth in the 200-yard individual medley and swam the butterfly leg of our third-place medley relay team.

Other Top Sizers

The only other Techer to finish in the top six was Bob Hall, with a fourth in the 200-yard individual medley. Bob also finished eighth in the 200-yard breaststroke and swam the breaststroke leg of the medley relay.

Tech's other high point-scorer was Tim Hight, with a seventh, ninth, and tenth in the 200-, 100-, and 500-yard freestyles, respectively.

Also, Tech's "All-Stars" relay team finished fourth, despite the fact that their anchor man had a sprained ankle.

Chim, Ox, Sweep

The final score of the meet was Claremont 516, Occidental 316, Redlands 172, Caltech 161, Pomona 65. Swimmers from Chim and Ox won every event on the swim meet.

Bob Coleman and Jim Jakway will fly to Pennsylvania next week to swim in the NAIA national meet. Bob will swim in the 200- and 400-yard individual medleys and in one other event, while Jim will compete in the 100- and 200-yard butterflies.