

THE
UNIVERSITY
OF UTAH

June 14, 1983

Dr. Joseph Andrade
Department of Bioengineering
Merrill Engineering Building
Campus

Dear Joe:

I will be most pleased to recommend your appointment as Dean of the College of Engineering, effective July 1, 1983 to the President and to the Institutional Council. The terms of your appointment will involve a nine-month contract during which time you will receive your current academic salary of \$39,215. This salary will be augmented by a dean's stipend of \$11,000. For the record, your academic salary will be split between Materials Science (55%) and Bioengineering (45%). Each of these departments should determine what your academic salary should be each year so that at the time you elect to return to the faculty your academic salary will have been adjusted appropriately. Your dean's stipend will also be adjusted annually.

In recognition of the fact that you will be cutting down your participation in Materials Science as you assume your administrative burdens, I will arrange to have a salary line in the amount of \$21,000 permanently transferred to the Materials Science Department. This line should be earmarked for an entry-level faculty member to be assigned to take charge of and be responsible for the operation and development of the STEM facility. I recognize that the amount assigned is only sufficient to fund a 3/4 FTE. As opportunity allows you may wish to augment this line to full-time.

Furthermore, I understand that you will continue to contribute academically to the instructional program in Bioengineering at a somewhat reduced level of participation. In recognition of this, I am transferring \$11,400 to your office as a Dean's replacement line, so that you may transfer \$6,000 annually to Bioengineering. You may use the balance of the Dean's replacement line to meet temporary obligations such as contributing to E.B. Christiansen's support until he retires.

DAVID PIERPONT GARDNER
PRESIDENT
202 PARK BUILDING
SALT LAKE CITY, UTAH 84112
801-581-5701

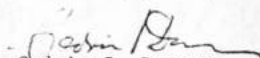
Dr. Joseph Andrade
June 14, 1983
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In the long run, the Dean's replacement line should be augmented, as faculty turnover allows, to a full-time entry level Engineering faculty salary.

The source of funding for all these immediate arrangements will be the Dean of Engineering line that I currently hold in my office in the amount of \$36,000, and Dean Lattman's Engineering salary line of \$6,400.

Finally, efforts will be made to increase the availability of instructional computing time, and to bring into balance the teaching program, especially that part that depends on the services of teaching assistants. The latter may depend for the time being more on enrollment control than on budgetary increases. I am looking forward very much to working with you.

Sincerely yours,


Cedric I. Davern
Vice President for
Academic Affairs

cc: Leon Robertson

DEAN'S OFFICE
UNIVERSITY OF UTAH
COLLEGE OF ENGINEERING

MEMORANDUM

TO: Faculty and Staff
College of Engineering

DATE: 17 June 1983

FROM: J. D. Andrade

J. D. Andrade

As you know, I will assume the duties of the Dean of the College of Engineering effective July 1, 1983, conditional upon the approval of my nomination by the President and the Institutional Council. I have asked Dr. Robert E. Stephenson to continue on as Associate Dean, Dr. H. R. Jacobs to continue on as Associate Dean for Research and Mrs. Marvel Leader to continue as Administrative Officer. They have all kindly agreed to do so; therefore, there should be no disruption in Dean's Office activities during the transition.

Priority 1: My first immediate priority is to develop the information base which I need to fully represent the College of Engineering in the Park Building, elsewhere on the campus, and to the local industrial and related communities. In order to accomplish this, I am meeting with the chairmen of all departments individually, with their administrative assistants individually, and will endeavor to meet with each and every member of the faculty and the senior staff as soon as mutually convenient.

Priority 2: The College is in the unique situation of having many more students than it has space to accommodate them. This problem is more acute in some departments than in others. This is both a problem and a unique opportunity. It is an opportunity to upgrade dramatically our undergraduate programs and the quality of our graduates. It is a problem to maintain the integrity and viability of our programs until more space becomes available. Most departments have addressed this problem. Working closely with the Executive Committee of the College, i.e., the Chairmen and the Associate Deans, we will attempt to develop a college-wide undergraduate enrollment limitation program by the end of the summer term, relying heavily, of course, on those programs already implemented by the respective departments. Because of service courses and joint courses, the problem is more of a college-wide nature than one of individual departments. If you have ideas along these lines that have not already been transmitted to your chairperson, please do that as soon as possible.

Priority 3: As a decision has already been made about the distribution of space in the new Energy and Minerals Research complex between the College of Engineering and the College of Mines and on the construction of a new classroom building on the south side of MEB, it is appropriate to take a hard look at the space assigned to the College and its space needs. I expect to be working very closely with Associate Deans Bob Stephenson and Bob Jacobs and with the Chairpersons to develop an optimum space allocation plan by mid to late summer. This plan would, of course, be implemented in stages.

Faculty of the College
17 June 1983
Page Two

Stage one will occur in about 8-9 months when the new Energy Research Laboratory Building A is completed. At about the same time the remodeling of the old Bureau of Mines complex should be completed and phase 2 occupancy can begin. This should include all of Building Two, except the east end which is not being renovated, all of Buildings Three and Four and half of Building Five. This phase two space will roughly go half to Mines and half to Engineering. Building One will be occupied by the Department of Family and Consumer Studies for 18 months (until summer of 1985) while the Emery Building is being renovated. When Family and Consumer Studies vacates Building One, it will then be occupied by Mines on the first and fourth floors and Engineering on the second and third floors.

There will have to be some space adjustments this summer, however, in order to accommodate new faculty and obvious growth in specific programs. The possible reallocation or reassignment of teaching laboratory space and service unit space, such as machine and electrical shops, will also be considered.

If your space needs and requests have not already been transmitted to your department chairperson, then I urge you to get that information to him as soon as possible. Each department chairperson must be fully informed on the space needs and requirements of each of their faculty and staff.

Priority 4: Although the University has received modest funds for the purchase of new equipment through the Institutional Funds Committee and for the updating and refurbishment of existing equipment through the special overhead reimbursement funds provided for the last several years, no mechanism has been provided for the maintenance of equipment. I will be working closely with Associate Dean Bob Jacobs to put together a plan for a college-wide major equipment operation and maintenance program by mid summer. It is expected and hoped that an appropriate mix of University and private industrial support will be obtainable to fund such a program. We will also be examining the availability of equipment and developing means to encourage optimum and multiple use of that equipment. Your needs and requirements regarding maintenance of existing equipment or access to and utilization of equipment in the College should be made known to your chairperson and to Bob Jacobs.

I will be working closely with the College Advisory Committee and with local and national industrial and economic leaders in hopes of obtaining significant outside support to alleviate some of the more pressing economic problems in the College. Your suggestions and input along these lines would be gratefully appreciated.

There are, of course, many other problems, needs and opportunities within the College of Engineering. As we make progress, I will certainly keep you as completely informed as possible and request your input as fully as possible. If you have any information that you feel may be useful to me or to the Associate Deans in working on any of these problems, we would certainly appreciate receiving it.


I look forward to meeting with each of you and to working with you to further develop, improve and expand the College of Engineering. I will need your assistance, cooperation, understanding and patience in the years ahead.

DEAN'S OFFICE
UNIVERSITY OF UTAH
COLLEGE OF ENGINEERING

MEMORANDUM

TO: Faculty and Staff of the
College of Engineering

DATE: 4 August 1983

FROM: J. D. Andrade 

SUBJECT: Progress Report No. 1

In my first month as Dean, I have had the opportunity to become very deeply involved in a number of problems and opportunities facing the College. As I outlined to all of you in my memo of June 17, prior to assuming this position, I felt that there were a number of key priorities to which I should initially direct my attention:

1. Enrollment Limitation

Total enrollment in the College has increased by 50% in the last two years! Fall 1983 enrollment was 3369. The substantial increase over the last several years is pleasing and reassuring but it has also severely overtaxed our limited faculty, laboratory and related resources. The increased numbers have resulted in very large classes, overuse of teaching laboratories, and other problems, not the least of which it is overburdening faculty with undergraduate teaching responsibilities beyond what could be considered acceptable loads. For this reason the chairpersons have formulated an enrollment limitation plan which you will be discussing at your individual faculty meetings. Controls on admission to major status at the junior level are already in place in several impacted departments. The College-wide plan controls enrollment at the sophomore level. The plan also provides a mechanism for the student to have first, second and third choices as to major and to be redirected to choices two or three if his first choice cannot be met.

We have already discussed the plan with the central administration. Because of due notice considerations, the plan will not be fully implemented until Fall, 1984. Enrollments may be constrained this fall on the basis of size of the available classrooms, prerequisite enforcement, and TA limitations.

Each of your department chairmen has copies of the plan which you may obtain from his office or from Marvel. Please direct your comments to your department chairperson. The plan will be revised at periodic intervals as needed.

2. Space

Because Building A of the Energy and Minerals Research Complex

is now well underway and should be completed and ready for occupancy by January 1, 1984, it is imperative that the decisions as to occupancy of that building be made right away. Minor changes which may need to be made in the laboratories had to be given to the architect effective August 1 to minimize costs associated with such changes. As that space is all of a wet chemical nature, i.e., all labs have sinks, cabinets and hoods, it appears that those activities in the College which can make optimum use of such space should be given first choice and consideration in occupancy of Building A. These activities appear to be the environmental engineering program of Civil Engineering, Chemical Engineering, polymer and related chemical activities in Materials Science and Engineering.

If you have thoughts as to other components of the College which should be housed in Building A, please get that information to me immediately.

The move into Building A, which is anticipated to occur in late December 1983, will, of course, free up some space in MEB. In order to optimally utilize that space, some remodeling and reallocation of space may be required. In order to have the lead time to obtain the funds and to remodel the space, it is imperative that space allocations in MEB be considered immediately. R. Stephenson and I have been studying that problem extensively for the past month and have discussed it in considerable detail with many of you. There are a number of new College programs or thrust areas which, of course, require space. This includes the computer assisted design activities, computer assisted manufacturing and robotics activities, biochemical engineering and related activities, microelectronics and semiconductor programs, the microwave tube program in EE, the growth in Computer Science research programs, as well as new faculty which have come on board in the last year. What this really means is that Building A will not lead to any surplus space in either Building A or MEB. Even with Building A being on line, we still have a space crunch in this College.

The chairpersons have all been asked to meet with you individually and to be prepared to represent you in all space discussions. A meeting of the chairpersons will be held on August 10 at which most of the space reallocations will be discussed and, hopefully, decided. A new classroom building is in the planning stages and is expected to be available in about two years. The lecture rooms and several teaching laboratories available in that building will probably enable us to utilize some classroom space in MEB for office and laboratory purposes.

I think it is already clear that if this College continues to grow, in terms of graduate student research as well as improved undergraduate instruction, more space will be required in the very near future. I will begin working shortly with the higher administration on a long-term space plan for the College, possibly an additional building, three to five years from now.

3. Finances

The Dean's Office, together with the chairmen, is working hard

to put together extensive documentation on the faculty salary problem in this College and the serious competitive situation we face in holding our faculty against the offers of industry and other universities. Drs. Davern, Brophy and Peterson are all well aware of this problem and will become even more aware as we continue to provide them with the appropriate information. I am reasonably confident that we will see some relief in this regard by the end of the next legislative session.

In addition to working hard to improve our State budget situation, I will be concentrating a good deal of time and Dean's Office resources on attempting to obtain outside funds from private, philanthropic and industrial sources. I envision at this time two general thrusts: one is working very closely with the Development Office to define a number of the key projects which require funding in the College. For example,

1. Improvement in teaching laboratories,
2. Named endowed chairs and named endowed laboratories,
3. Funds for specific laboratory remodeling
4. New building development drive.

In addition, we are presently developing an expanded version of the Industrial Associates program which already exists. In addition to a general Industrial Associates program, we anticipate a number of focused industry-university collaboration programs. The first will probably be in the area of microelectronics fabrication and processing, i.e., the Hedco Laboratory, in which a small number of firms will subscribe substantial amounts on an annual recurring basis to fund the teaching and graduate research activities in this laboratory. In exchange for this, they would have the security of knowing that this College is producing individuals in sufficient numbers for the needs of local and non-local micro-electronic subscribers. Development of this effort is already considerably advanced.

Other areas we might consider in the future include computer assisted manufacturing and robotics, medical devices and instrumentation, and biochemical engineering/biotechnology.

Your thoughts as to other University-Industry programs would be appreciated. I would appreciate your ideas, thoughts, criticisms, etc. regarding these proposals.

We are working with Dr. Jim Brophy and Dr. C. Peterson regarding the possibility of reimbursed overhead for the partial support of maintenance and operation of central research equipment in the College. We have already begun the process of assembling the data for this request.

4. Publicity

It is important that information as to the quality of our teaching and research activities gets out to the general public. For this reason I will be working closely with Public Relations on College publicity. Your thoughts as to appropriate stories

and informational items of interest to the university community, the local general public and the national public would be appreciated. We will begin by arranging publicity for various key research components of the College.

One area that would be particularly helpful is to identify specific undergraduate or graduate students who are making unique, unusual, or particularly excellent contributions. We can then build the stories and press releases around these particular individuals which means a strong human interest element.

Please direct to me your thoughts, ideas, concerns and suggestions along these lines and others that you feel are important to the College.

Related to public relations is the question of the availability of suitable materials for the dissemination of information about the College. We are proceeding with the publication of a College Bulletin to describe the College's undergraduate program. That Bulletin should be available in January 1984. We are also proceeding with the preparation of several small brochures dealing with the Industrial Associates and University/Industry interaction programs. Dr. H. R. Jacobs, Associate Dean for Research, is preparing a research report brochure. A number of other inexpensive documents are also being considered.

I would appreciate knowing when you receive a new award or prize or other recognition, when you have a book published, a patent issued, a company founded, a student recognized, a grant or contract awarded or other events which are of interest to your colleagues and to the community at large.

5. Future Topics

Please discuss among yourselves and in faculty meetings the question of late afternoon-evening courses to permit Master of Engineering degrees to be earned by full-time engineers employed by local industry. Practically all urban universities provide such services. We don't (except for the Industrial Engineering programs). Should we?

Each department should be formulating a short (three year) and long (five-ten years) term Department Development Plan. Where does your department want to be in 3, 5, 10 years? What areas should we emphasize? We don't have the resources to cover in depth all areas of all engineering disciplines. We must be selective.

6. Help

Your assistance with any of these projects would be most appreciated. Considerable faculty assistance will be needed to get these programs underway. Please let me know if you are interested in helping.

Thanks for your help and cooperation.

cc. C. I. Davern, J. J. Brophy, M. E. Wadsworth

DEAN'S OFFICE
UNIVERSITY OF UTAH
COLLEGE OF ENGINEERING

MEMORANDUM

TO: Faculty of the
College of Engineering

DATE: 19 September 1983

FROM: J. D. Andrade

SUBJECT: College Faculty Meeting

As in the past, there will be a meeting of all College of Engineering faculty following the general University faculty meeting on Friday morning, September 23. We have scheduled this for 10:15 in Room 3176 MEB. I sincerely hope that all of you will be able to attend as there are a number of informational and action items to be considered.

The agenda is as follows:

1. Welcome
2. Introduction of New and Visiting Faculty with announcements of faculty awards
3. General Announcements
4. Facilities Report
5. Presentation of Awards
6. Research Report
7. Amendment of College Charter
8. Dean's Report on State of Future of College
9. Open Discussion

Several departments have scheduled individual faculty meetings during the afternoon. I hope that all of your faculty and staff will join us for lunch on the lawn just south of the building following the College meeting and before the departmental meetings. This will be an opportunity for all to get acquainted and enjoy a hamburger together.

COLLEGE FACULTY MEETING AGENDA
23 September 1983

1. WELCOME -- JDA
2. INTRODUCTION of new & visiting faculty and note of awards to faculty -- Department Chairpersons
3. ANNOUNCEMENTS:
CAD Facility -- JDA
Cetron Seminar -- JDA
Equipment Donations -- JDA
Lunch -- JDA
ASEE meeting -- RES
4. FACILITIES REPORT -- RES
New Building & EMRC
Closure of Gertsch Room
Security System
Emergency Lighting System
5. AWARDS:
College Teaching Awards -- RES
Patent Prize -- JDA
1550d 1/80 → 8/85
Boehm (ASME Fellow) -- HRJ
6. RESEARCH REPORT -- HRJ
7. COLLEGE COUNCIL -- WJK
8. REPORT on State and Future of College -- JDA
9. DISCUSSION -- JDA
10. ADJOURN

Andrade

Antoine - ME
Jacobson - ME
Rueschold - CS
Therrell - civil

Magdy Iskander - EE
Steve Johnson - BIOE
Don Green - MSE/HRO
Sun Yau Kwei - BIO

devris Teach & awards

Prof sec
Teach
Res
Annov.

Hand leads.

Res.
\$4.5M state
7M Res → 2M overhead -
overhead & arguments

Cliff Boyner
ASEE

DEAN'S OFFICE
UNIVERSITY OF UTAH
COLLEGE OF ENGINEERING

MEMORANDUM

TO: All Faculty and Staff
FROM: J. D. Andrade
SUBJECT: Update and 5 Month Progress Report

DATE: December 9, 1983

As the quarter nears an end and you have the opportunity to relax a little, I want to thank each and every one of you for your teaching, research, and service activities on behalf of the College, particularly in this time of high teaching loads and relatively low salaries. This office will try to keep you informed on the many activities, issues, policies and decisions affecting the College. If you have any question whatsoever, or any input, please let us know. Communication is a two-way street. The Dean's Office is endeavoring to communicate as openly and efficiently as possible, but even with the best intentions and efforts, communication problems often evolve. If you would like to know about anything going on, please do not be bashful or intimidated, come and find out.

REMODELING MEB: A significant number of space shuffles and remodeling have occurred since July 1:

1. Part of the east penthouse, fourth floor, was remodeled to accommodate R. Brandt's research activities in CS. This move freed up space on the third floor near EE, formerly occupied by Brandt and his people, which is now in use by EE for their new HP computer system.
2. IE's third floor lab near the Computer Center was moved to the basement to accommodate an increased terminal facility for CS. IE and BioE are sharing a basement laboratory on a temporary basis in the northeast corner of the building, formerly occupied by ChE.
3. Rooms 1041 and 2081, formerly the CE hydraulics lab, are being extensively remodeled, largely to accommodate the growing activities of R. Grow and his microwave program in EE. The wind tunnel in the 2081 facility has been maintained, and the hydraulics component of the 1041 facility is being repaired and should be functional soon.
4. Computer presence has increased dramatically in the last five months. ME now has a terminal room on the second floor, west side. The VAX host machine is in the south end of the Computer Center machine room; an Evans and Sutherland PS-300 graphic system donated to the College is being used in CAD courses in ME and CS.

R. E. Stephenson is presently assembling remodeling requests. All remodeling input and other space requests should be in his hands. If we don't have something in writing, nothing will happen.

NEW SPACE: Building A and buildings 2 to 5 immediately south of MEB will probably not be ready for occupancy until the first of March. Most of that space has already been assigned. Those assigned space have been informed. Specific planning for the move will be initiated as soon as a firm occupancy date is available. There will, of course, be some space vacated in MEB; much of that has already been reassigned due to normal growth and expansion in the College. Some of it is still unassigned. If you have any needs for space, those requests must be in writing to either me or R. E. Stephenson as soon as possible.

An expanded Industrial Affiliates Program has been in the development stages for the past five months. A brochure will be available for distribution the first week of January.

A number of special Centers to facilitate inter- and multidisciplinary activities in the College and industrial interaction are in the planning stages. These Centers and their tentative directors are as follows:

- Microelectronics (Hedco Lab)--R. Huber
- Composite Materials--G. Dvorak
- CAD/CAM/Robotics--S. Jacobsen
- Energy Systems--G. Sandquist
- Optical Sensors/Artificial Vision--D. Christensen
- Fluid Mechanics (existing)--G. Flandro
- Biomedical Design (existing)--S. Jacobsen
- Microwave Tube Training Research (existing)--R. Grow
- Controlled Chemical Delivery (under consideration)
- Innovative Engineering Education (under consideration)
- Space Systems (under consideration)

If you have any interest in participating in one or more of these multidisciplinary Centers, and have not already been contacted, please contact the designated director immediately. A special brochure is being prepared which describes this Center approach.

The materials for the Research Directory are now being assembled and will be delivered for printing in early January. If you were not asked to fill out a personal research inventory and data sheet for the Research Directory, please see Marvel Leader in the Dean's Office or H. R. Jacobs immediately. It is imperative that all faculty be represented in the Research Directory. The 2nd Student Newsletter to be printed between now and New Year's, will be distributed to students on the first day of classes winter quarter. If you have any brief items you would like publicized in the newsletter, please get them to Marvel Leader immediately.

Teaching loads have been discussed extensively in the last 5 months. We are endeavoring to manage the enrollment in the College to reduce teaching loads to manageable levels. You should have already discussed this subject in your faculty meetings. If not, please see your Chairperson or me as soon as possible. The Enrollment Limitation Plan is in effect, and will be implemented

in April or May. R. E. Stephenson is coordinating this activity. If you have any thoughts or input, get them to him immediately.

We are planning a large summer school offering, primarily enrollment-impacted service courses which students may have difficulty taking during this normal academic year. The summer school courses will cover full teaching costs. The faculty will be compensated at appropriate levels. If you have any interest in teaching summer school, particularly service courses such as Statics, Dynamics, Strength of Materials, Fluid Mechanics, Thermo, etc., please see your Chairperson immediately. H. R. Jacobs will be coordinating this for the College.

If the high teaching loads and low salaries are getting to you, and you are seriously considering leaving, don't! I have now had considerable opportunity to interact with the new higher administration. They are most aware and responsive to our particular problems and needs. I assure you that we are all doing the best we can to significantly improve the salary situation, and you already have seen the plans to change and improve the teaching load situation. I am convinced that the situation will change considerably for the better effective this summer. Please do not make, (do not even consider making!) any irreversible decisions until you give us the opportunity to improve the situation.

Donation appeal letters have been sent to all 7000 College of Engineering alumni as part of a program to raise funds for a variety of College needs.

I urge you to review the earlier progress report of August 4th regarding publicity and ask your cooperation. Please inform me or the Public Relations Office of your awards, accomplishments, etc. which may be of interest to the press. The more positive publicity we can get, particularly before the start of the legislative session, the more beneficial it will be--not only for the College but for the University as a whole.

COMMUNICATION: I want to communicate everything that is relevant and important. On the other hand, I don't want to bother you with too many details. My model of a Dean's Office is that it ought to provide the resources, policies, and decisions to permit you and the departments to function. An ideal administration is one that stays out of your way, but is there when you need help or assistance. If any of you feel you would like to know more about any specific activity, please, by all means, let us know.

We also need your help. The College, frankly, has to play a lot of catch-up ball. It has been neglected for many years. As a result, the Dean's Office has a lot of balls in the air at one time. We certainly could use help in initiating many of these programs, such as the Industrial Affiliates Program, the summer school, space management, remodeling, building planning, etc. If any of you have any interests along these lines, please let us know.

The Dean's Office is developing a comprehensive file on Universities and research laboratories throughout the country and overseas. A file on funding sources and an industry file, including Annual Reports, is available as well as other information. These files are, of course, available to you for use in the Dean's Office.

There has been considerable discussion of computer equipment in the College and the possibility of networking the entire College, possibly by as early as summer, 1984. If you have specific thoughts or needs along these lines, please

see R. Frank, Computer Science; Ed Sharp, Computer Center; R. Frost, EE; A. Hemried, CE; Bob Seader, ChE; Q. Brewster, M & IE.

Nominations for sabbatical leave for the 1984-1985 year are due in my office by February 1. If you have any interests or desires for a sabbatical, please see your Chairperson right away.

The Dean's Office, together with R. Brandt in Computer Science, is studying the possible application of computer-aided/assisted instruction in the lower division engineering courses. If you are interested in being involved in this study and in the evaluation of presently available courseware, please let one of us know as soon as possible.

The College Council is the elected representative body of the faculty. This group will be asked to address a number of key issues in the next few months, including:

Growth--How big do we want to be?

Buildings/Space--should we begin planning for a major new building to support College growth?

Should we have a Teaching Professor or similar rank?

Engineering Week in late February is now in the planning stage. Please assist your students and colleagues in their Engineering Week activities.

Books--if you have authored or edited a book in the last 10 or so years, we would like to include it in a planned display near the Dean's Office. Please deliver a copy of the book (or the complete citation so we can purchase it) to Marvel by early January.

I hope you have a happy holiday season!

cc: I Altman
J. Brophy
M. Wadsworth
E. Sharp

DEAN'S OFFICE
UNIVERSITY OF UTAH
COLLEGE OF ENGINEERING

MEMORANDUM

TO: Faculty, College of Engineering DATE: 27 January 1984

FROM: J. D. Andrade

SUBJECT: College-wide Faculty Meeting

There will be a meeting of the entire faculty of the College on Tuesday, February 7, at 3:30 p.m. in Room 3176, Merrill Engineering Building.

The main purpose of the meeting is to complete discussions and action on the proposed reorganization of the Engineering College Council. I hope you will be able to attend.

I remind you that the deadline for sabbatical leave requests to be received in my office is February 1. They must first, of course, be approved by your department and each request should contain the following information:

1. Faculty member's name, present rank, date of appointment to the faculty, and date(s) of any sabbatical(s) taken since the date of appointment.
2. Quarter(s) during 84-85 when faculty member will be scheduled for leave.
3. Brief summary of the faculty member's plans for sabbatical leave.

Budget (Attached)
Apple
Tech Fun Group
Univ. For Engrg
Coll Council
(Memo to Fac)

89/6.7000.000
94

2/14/84

(Fac Meet)

State of College -

Past, Present & Future Needs, Programs, ^{Future} Objectives

How do we rank?

Good reputation as a moderately sized college
w/excellent teaching, ^{and} research.
300 BSc / 83 MS/ME / 23 PhD Spr & 3

89 FTE Faculty

7 Depts (1 Grad)

all major energy areas

ME/IE

EE

Civil

Chemical

and a number of nonclassical interdisciplinary areas

MSE

CS

BIO

* Good student pool - no enrollment problem.

good location - facilities

(due to research)

Good res - major energy res inst. nearly 80K/FTE

Some state commitment

new bridges
growing indus base

broad distn
0 - \$1M

Problems 7/1 - 2 key problems

2/1 Fac / student financially

Fac credits - ME

diagnosis →

a) hi enroll ⇒ ↑ teach costs

b) low salaries ⇒ ↑ job offers

at washer we would need 45 new fac positions
overnight - clearly NOT possible (limit offerings)
So? C+ enrollment

Xpensive

Impact:

hard on students
difficult 4 term period
state \rightarrow more emp's good for industry

2. Salaries \uparrow them — how?

~~Mathson initiative~~
need effective Fall 84
 $\sim 25\%$ increase list to stay competitive
Mathson initiative — even if fully funded —
avoid only go 1/2 way
Sen 1. Univ realloc/redirect major resources
2. selective increase

Univ \uparrow ~~25%~~ — 6% + 2%
College min of 8%
perhaps 10%.

turnible —

What to do?

1. Very selective \uparrow
2. Soft money component
3. ~~Reduce Professors~~ ^{industrial support} (Learn program)
4. Prone programs

even more limited enrollment.

3. Other Needs

Labs
Computer Access
Fees?

Plans/Proposals

Moderate size / not well funded —
use resources carefully

1. build on existing strengths / synergisms / creatives
2. don't compete in very expensive areas.
3. get real doors / can do people / creative /
promote times innovative
Koff
Jacobsen
Cutler

4. ~~univ~~ ^{innovative} areas / programs
don't follow the crowd
~~that~~ has to be a leader — as well as
college
prepare people for existing indust/econ
environ — prepare for future
dev.

To build this state's economy &
this college's reputation / status.

We'd like to be good intel to each
of you are key people in your respect
communities in 10-15 yrs — ~~fund~~

What are those areas? Any stat ball?
How do we get there?
Are we willing to gamble?

Your Views — advice &?

Start charge w/ Fees for Computer / Labs
\$ 100/hd/yr 300/900 $\sim 30\%$ \uparrow but \downarrow as exist fees \downarrow

~~500~~
~~500,000~~
\$ 500,000

(F) *And affil-*

Roundup

U. engineer students seek closer ties with industry

By George Ferguson
Associate business editor

The University of Utah College of Engineering has not only an opportunity but a responsibility to interact with industry — particularly local industry, says Dr. J.D. Andrade, the college's new dean.

"Engineering is a profession oriented toward industry, so it is important to have a very close dialogue. In these economically difficult times for higher education, industry — at least on a nationwide basis — has indicated an interest and willingness to help support, and contribute to, technical education," says Andrade.

To help generate this closer association, Andrade is initiating a Utah Industrial Affiliates Program.

"Industrial development and the economic base is greatly expanding in Salt Lake Valley. The state wants to further accelerate this expansion. I think the school's College of Engineering needs to interact more closely with existing industries and assist the state in attracting new industries," Andrade said.

"Most of the hi-tech companies like to locate near a strong research-oriented school like the University of Utah. Good examples of this are the Silicon Valley near Stanford University and the Route 128 phenomenon near the Massachusetts Institute of Technology."

Andrade thinks, historically, the University of Utah College of Engineering has not had an optimum interaction with local industry.

"Purpose of the Utah Industrial Affiliates Program is to provide a mechanism by which industry can feel free to input practical knowledge — even to the extent of setting up brainstorming sessions. The program also will, hopefully, determine industry's technical needs so the university can gain a more optimum placement of graduate engineer students into local industries.

"We want industry to advise us on new programs and new directions for engineers, new technologies, and continuing education sessions," says Andrade.

Andrade notes that the college established a modest Technical Liaison Program three years ago. The Industrial Affiliates Program, however, is meant to expand that effort into full collaboration and interaction, he says. "The new program is



J.D. Andrade

available to small as well as large businesses, and participants may choose to affiliate directly with the academic department of greatest interest to them."

Andrade points to these benefits and services:

- A chance to meet with faculty and students each year at the annual industrial affiliates meeting.
- An opportunity to be informed on published research in the College of Engineering, and receive the annual Research Report and faculty publication list.
- A subscription to the *Industrial Affiliates Newsletter* with information about the program, the college, research and educational activities and other topics.
- An opportunity to receive faculty technical publications.
- Advance availability of the university's Patent and Product Development Office regarding licensing and commercial development of technologies.
- A chance to interact and affiliate directly with the department or program of greatest direct interest.
- Access to the university's library services and information retrieval systems.
- Complimentary membership to the University of Utah President's Club, including free parking and an invitation to the annual President's Club dinner.

- Announcements of seminars short courses, and late afternoon or evening course programs.

- A chance to recommend special courses and programs via the Division of Continuing Education and the College of Engineering.

Andrade said the optimum education of engineers is clearly related to the background they get in high schools. "I think high school engineering preparation has to be improved considerably — particularly in basic math, chemistry, physics and biology.

"High school students who take these basics in high school are reasonably prepared for college endeavor. But too many students take the easy path through high school and then decide to study engineering. They have a difficult time.

"We are seeing more and more student interest in engineering at the freshman level. Our enrollment jumped 50 percent between 1981 and 1983. This occurred with virtually no increase in our budget. As a result we have had to impose some severe enrollment restrictions in the college of engineering.

"I think the student demand for engineering studies in this state is evident. But the state's colleges simply do not have the resources to properly handle that demand. Thus, a lot of promising engineer students are being turned away. This is especially an acute problem in Utah because there will continue to be very large increases in high school and college-age populations.

"It is crucial to Utah growth to have a pool of trained engineering talent. We hope to get that message across to industry and become partners with industry in achieving this end.

"Ten years or so ago, Utah didn't have its present industrial base, and engineers looked outside the state for opportunities. That has changed. We have the base, and it is expanding. We need to have trained engineers available."

Andrade said the College of Engineering is putting together a number of industrial advisory committees and panels. "They will advise me and the college of industry needs."

Andrade invites interested parties to contact the college either in person or by phoning 581-6911.

THE
UNIVERSITY
OF UTAH

MEMORANDUM

COLLEGE OF ENGINEERING
OFFICE OF THE DEAN
2000 MERRILL ENGINEERING BUILDING
SALT LAKE CITY, UTAH 84142
TELEPHONE 531-561-0771

DATE: April 23, 1984

TO: Faculty and Staff, College of Engineering

FROM: J. D. Andrade *J. Andrade*

SUBJECT: Update: Budgets and Salaries and Other Matters

Your chairperson has discussed with you your personal salary situation for the 1984-85 year. As you may recall from our previous faculty meetings, salary increases--coupled with enrollment limitations-- were the two major priorities of the Dean's office for this current year. I am confident that we have made significant progress.

All faculty have received a salary increase ranging from 2-12%. In all cases the increases were decided on the basis of merit, which included research performance, teaching performance, and service. In addition to these salary increases, one-third of the faculty received significant merit-equity increases. These merit-equity increases were possible because the University Administration recognized the critical problems and needs in Engineering and made a significant effort to address those needs. Because of the limited State appropriation and limited University resources, equity increases were not awarded to all faculty, even though all faculty are clearly deserving of such increases in light of market pressures.

These salary increases put us back in the competitive range for comparable State universities.

Thank you for your patience, cooperation, and understanding during these difficult budget deliberations and decisions.

In addition, the College received a budget increase in light of its significant enrollment pressures. This resulted in three teaching faculty positions which have been allocated to Computer Science, Electrical Engineering, and Mechanical and Industrial Engineering in light of their significant enrollment pressures. Some of these funds were used to address the TA problem, office and technical staff problems, and faculty recruitment problems.

A second priority was the high teaching loads. This problem is being addressed by the enrollment implementation plan which has been agreed to by all departments and which is being placed in effect for implementation effective Fall Quarter. Basically, each department has indicated the size of its graduating class commensurate with its present faculty, staff, and laboratory resources. That number, coupled with the appropriate scaling

factors, is being used to decide on the number of students who will be admitted to Sophomore status in each of the departments. Students will be admitted on the basis of their GPA performance in their first year or Freshman courses at the University of Utah. Copies of the plan are attached, including the application form which students will begin filling out in a few weeks.

I am sure you will get many students complaining about this plan. It has been very carefully studied and discussed, both within and without the College, and has been approved at all levels. I urge you to become familiar with it in order to be able to explain both the need for it and the implementation of it to your students who may raise questions and ask advice.

Over the next several years as we fully implement this limitation plan, our teaching loads can be expected to be adjusted to reasonable levels for colleges of engineering of our stature nationally.

I think we have made significant progress on both the salary and teaching load fronts. I hope with these two problems in part behind us that we can all focus our attentions on what we should really be doing--performing outstanding research and educating outstanding engineers.

One of our very major problems in the education arena has been the quality of our undergraduate laboratories, the availability and suitability of computer facilities for undergraduate instruction, and the cost associated with both of these. Supplies and equipment budgets provided by the states have been cut over the last several years and in this year's budget only a 4% increase was available. Given the rapidly increasing sophistication, cost, and needs of engineering education, the situation is totally intolerable. Most engineering schools of comparable size and quality are very significantly improving their laboratories and their computer capabilities. We must do so or our students will simply not be competitive with their counterparts from other institutions. For this reason I have begun discussions with both the students and the higher administration regarding the possibility of imposing course fees on a much greater scale than the College has done in the past. The Executive Committee, and The College Council, and most student leaders have been appraised of this initiative and support it--certainly not enthusiastically but because no alternative appears immediate.

As some of this information has leaked to the popular press, a number of the students are concerned. If students approach you, please clearly inform them of the gravity of the supplies and equipment situation, but also clearly tell them that the situation is presently under discussion and no decisions have been made. However, it is my intention to argue as forcibly as I can for implementation, effective Fall Quarter. To delay means that we continue to delay any upgrading of our undergraduate laboratories, computer experience for our students, and other factors, which will not only decrease the worth of their degree but significantly impact upon our accreditation reviews in the next several years.

We are continuing our initiatives with respect to industrial collaboration and interaction. The Industrial Affiliate program is now launched, and with your assistance this spring and over the summer, we intend to personally contact and involve all local industries in the Program and the College.

Please remember the national meeting of the American Society for Engineering Education (ASEE) in Salt Lake (at the Salt Palace), June 24-28, 1984. I urge you all to participate. Programs and registration forms are available via Prof. Cliff Bryner, room 4002A, phone-8363. The College will pay for your registration fees if you register through Cliff. DO NOT REGISTER THROUGH ASEE!

A faculty meeting will be scheduled sometime in May to discuss these and any other issues which you like.

Thank you again for your understanding, cooperation, patience, and dedication.

JDA/ag

encl

cc: J. Brophy
I. Altman
A. Rothemich

COLLEGE OF ENGINEERING COMMITTEE ROSTER 1984-1985

| COMMITTEE | DEPARTMENTS | | | | | | | Mat.Sc. & Eng. |
|------------------------------------|--------------------|--|--------------------|--|---------------------|---------------------|---------------------|----------------|
| | Biochem. | Civil Eng. | Elec. Eng. | MAT Eng. | Chem. Eng. | Comp. Sc. | | |
| Alumni | Andrade (6911) | E. Nordquist (6934) M. Kessler (4653) | D. Grow (7634) | L. DeVries (7101) G. Sandquist (7372) | Christiansen (6129) | T. Carter (8224) | Stringfellow (8387) | |
| Computing Facilities | J. Wood (3910) | A. Hermied (4378) | R. Frost (6045) | O. Brewster (7105) | J. Seader (6916) | S. Thomas (3095) | R. Boyd (6865) | |
| Continuing Eng. Education | Christensen (7859) | C. Bryner (8363) | Gehmlich (3630) | M. Kennedy (6044) S. Baum (7965) | R. Boyd (6865) | D. Hanscom (7023) | P. Phillips (8574) | |
| Dean's Adv. Comm. New Prog. & Inv. | A. Janata (3837) | J. Yu (5556) | T. Stockham (8541) | S. Jacobsen (6499) | | L. Hollar (3203) | J. Byrne (8126) | |
| Industrial Interaction | R. Normann (7645) | C. Bryner (8363) | C. Durney (5096) | L. Isaacson (3503) | D. Dahlstrom (6915) | K. Smith (8653) | R. Gordon (6612) | |
| Public Relations | D. Lyman (8432) | N. Nostaghe (7871) | C. Westland (6038) | Van Voorhem (7687) | R. Aiken (5742) | G. Lindstrom (5586) | D. Lyman (8432) | |
| Research Development | | U. Lall (6701) | O. Gandhi (7743) | H. Jacobs (7106) | A. Raer (6918) | R. Keller (5554) | A. Virker (5396) | |
| Research Faculty | S. Johnson (7394) | M. Baird (6952) | | | | D. Brandt (6076) | H. Meuzelaar (4200) | |
| Seminar/Colloquia | A. Janata (3837) | G. Dvorak (6931) | B. Renner (6684) | R. Roodm (7104) | G. Hill (7547) | R. Fujimoto (8224) | H. Yamada (6449) | |
| Teaching Excellence | | | M. Iskander (6944) | L. DeVries (7101) | D. Salt (6917) | | | |

ASEE ANNUAL CONFERENCE

June 24-28, 1984

REGISTRATION FORM

For use Only by participants from sponsoring universities.
U of U, BYU, USU, WSC
Deadline May 25, 1984

1 REGISTRATION DATA - Please print clearly or type

Name _____ Male Female Number of party _____

Preferred Badge Name _____

Organization _____

Mailing Address _____

City State Zip _____

Accompanied by:

Children: (1) Name _____ Age _____ (3) Name _____ Age _____
(2) Name _____ Age _____ (4) Name _____ Age _____

Other: (1) Name _____ (2) Name _____

Phone Numbers: Office: _____ Home: _____

Disability requiring special services: _____

IF YOU ARE AN ASEE CAMPUS REP PLEASE CHECK HERE

Section 3. Check your registration status (complete names in Section 1 above)

- ASEE Member
- Non-member
- Student
- Spouse
- Children No. _____

5 TICKETED EVENTS Request for any ticketed event must be accompanied by a check for full price. See program for refund information.

| EVENT | QUAN | UNIT PRICE | SUBTOTAL | EVENT | QUAN | UNIT PRICE | SUBTOTAL |
|---------|------|------------|----------|-------|------|------------|----------|
| 0 7 0 0 | X | \$5.00 | = \$ | 9 | X | | = \$ |
| 0 7 0 1 | X | \$2.00 | = \$ | 10 | X | | = \$ |
| 2 1 0 0 | X | \$3.50 | = \$ | 11 | X | | = \$ |
| | X | | = \$ | 12 | X | | = \$ |
| | X | | = \$ | 13 | X | | = \$ |
| | X | | = \$ | 14 | X | | = \$ |
| | X | | = \$ | 15 | X | | = \$ |
| | X | | = \$ | 16 | X | | = \$ |

TOTAL FOR ALL TICKETED EVENTS \$ _____

Checks payable to: ASEE Annual Conference

Submit to
C. Bryner 4001 MEB
Civil Engineering
University of Utah
Salt Lake City, UT 84112

COLLEGE OF ENGINEERING
UNIVERSITY OF UTAH

APPLICATION FOR ADMISSION TO INTERMEDIATE STATUS--1984

Completed application must be in Dean's Office (2000 MEB)
by 5:00 p.m. on May 18, 1984.

1. Name _____ Social Security No. _____
Last First Middle

Local Address _____

Home Address (if different) _____
Street, City, State, Zip

Local Telephone _____ Home Telephone _____

2. Indicate your 1st, 2nd and 3rd engineering department preferences by entering the numbers 1, 2 or 3 opposite the departments of your choice. You may choose up to three (3) departments from the following:

- | | |
|--|--|
| <input type="checkbox"/> Chemical Engineering (36) | <input type="checkbox"/> Electrical Engineering (75) |
| <input type="checkbox"/> Civil Engineering (60) | <input type="checkbox"/> Materials Sci. & Engr. (20) |
| <input type="checkbox"/> Computer Science (70) | <input type="checkbox"/> Mechanical Engineering (80) |

The numbers in parentheses indicate the approximate anticipated size of the graduating class in each department. You will be considered for admission to each of the three departments for which you have indicated a preference in the order of your choice. You will NOT be considered for admission to departments for which you have not indicated a preference.

3. All courses you have completed from the following list, including Spring Quarter 1984 courses, will be included in calculating an admission GPA. Circle all the courses you will have completed by the end of Spring Quarter 1984. You must have taken at least 25 credit hours from this list to be eligible to apply for admission to intermediate status.

| | <i>Total Credit Hours</i> |
|--|---------------------------|
| Math 111, 112, 113 (4-4-4) | _____ |
| Chemistry 121, 122, 123 (5-5-5) | _____ |
| Physics 171, 172, 173 (4-4-4) | _____ |
| CS 101 or 104 (3-3) | _____ |
| CS 105 (3) | _____ |
| ME/CE 130 (3) | _____ |
| English 101 (4) | _____ |
| (Foreign students taken English 106 (5)) | _____ |
| Total | _____ |

(over)

DEAN'S OFFICE
UNIVERSITY OF UTAH
COLLEGE OF ENGINEERING

F
MEMORANDUM

TO: Faculty & Staff
College of Engineering

DATE: 5 June 1984

FROM: J. D. Andrade JDA

SUBJECT: Update/Summary/Progress Report

Many thanks for your efforts in behalf of the College and University this year. I sincerely hope your summer activities are productive, enjoyable, and stimulating.

The new University Administration has made a major commitment to Engineering. Clearly we cannot make up for years of neglect in one budget year, but we have made substantial progress this year. The commitment enabled all faculty and staff to receive modest salary increases (from 2-12%). In addition, one-third of the faculty received equity salary increases in consideration of merit, performance, and market pressures. We certainly have a long way to go in correcting our general salary situation. Salary increases is the College's #1 budget priority for the 1985-86 budget year.

Enrollment and teaching loads have been major problems this year as in years past. Our enrollment control plan is now being implemented. Freshman students have applied for intermediate (sophomore) status. Those applications are now being reviewed and the students will be selected by the Departments this summer. R. E. Stephenson is coordinating this effort. Over the next 2-3 years this plan will result in a significant decrease (~ 25-35%) in our overall teaching loads, placing us more in line with our peer institutions. In addition, the Administration provided four new faculty positions. Three are "teacher" slots for individuals to be involved solely in undergraduate education. These enrollment impact slots have been allocated to Computer Science, Mechanical Engineering, and Electrical Engineering. The additional slot has been fragmented for a variety of different College needs. Substantial increases in TA support were provided for Electrical Engineering and Mechanical Engineering, and modest increases for Civil Engineering and Computer Science. A modest increase in staff support for Electrical Engineering and Bioengineering was also funded.

We are now beginning to benefit from former Dean L. Lattman's efforts to develop additional space for the College. The new Energy and Minerals Research Center is now ready for occupancy, as well as Building #2 of the U.S. Bureau of Mines Complex. We will move into this space during the summer with R. E. Stephenson coordinating the move. A complete list of all space assignments and reassignments effective this summer has been distributed to

each chairperson and discussed in detail with him. For further information see your chairperson, R. E. Stephenson, or me.

A number of major remodeling projects in MEB have been completed this year. Several more will be completed this summer. The south end of the 4th floor penthouse will soon be remodeled into 11 offices, which will help alleviate our chronic office problem. Our present office deficits, several new and visiting faculty, and a number of visiting scholars will largely consume all present and proposed offices in MEB. Some significant office reassignments on the south end of the 2nd floor will occur as the new research space south of MEB has no office space. Many of those individuals with labs in that space will be assigned offices on the south end of MEB for their convenience. We urge your tolerance and cooperation in the moves and adjustments which will be required this summer.

New administrative appointments this year are:

E. S. Folias, Acting Chairman, Civil Engineering, effective 6-24-84.

G. Sandquist, Acting Chairman, Mechanical & Industrial Engineering, effective 7-1-84.

K. L. DeVries, Associate Dean for Research, effective 7-1-84.

S. Baum, Director, Industrial Engineering program, effective immediately.

Mr. Guil Funston has been appointed Assistant Dean for Industrial Relations, a staff position reporting to J. D. Andrade. Mr. Funston will coordinate the College's growing industrial relations program. Please give him your cooperation and assistance.

We are working closely with the office of the President of the University to formulate a major State initiative on engineering education and research. This was briefly discussed in the faculty meeting with President Chase Peterson and Vice President Altman. Those faculty meetings resulted in open, spirited discussion. You are encouraged to inform the President, Vice President, and me of your suggestions, constructive criticism, and ideas. All such input is most helpful.

The search for the Chairperson of Mechanical and Industrial Engineering is progressing. All candidates will have visited by late June. We expect an individual to be named by early fall and to take over effective 1-1-85.

The Industrial Engineering undergraduate program is on hold until further notice. A thorough study is now in progress. A definitive recommendation will be made by early fall. It is highly probable that the recommendation will be to expand the program and request authorization for the Ph.D. degree, in order to be able to attract outstanding new faculty.

The Civil Engineering Department is developing a 5-year development plan and will begin a Chairperson search in early fall.

The faculty resignation rate has finally slowed down. Outstanding replacements are being recruited--several are already on board. You can expect a number of new faces at the fall faculty meeting.

Remember the annual meeting of The American Society For Engineering Education (ASEE) is being held in Salt Lake City, June 24-28. See C. Bryner (Civil) or D. Gehmlich (EE) for programs and registration information.

We are proceeding with efforts to develop College publications. The 1984-86 Bulletin will be out this summer describing all College academic programs. The Faculty Research Directory is now largely completed and will be published this summer. An Alumni Newsletter is now being formulated--we are continuing efforts at identifying and contacting key alumni.

R. E. Stephenson will be acting dean from June 11-21 and July 4 through August 5, as I will be out of town. Please give him your help, support, and cooperation.

Again, I hope you have an enjoyable and productive summer. Thanks!!

SEE YOU AT CONVOCATION!

JDA/ag

State of the College ^{Fall 84}

We came - to new people

1. back - to returning

& Hello to those of you

here all around

Meeting of 1st of year

new school year

Fac Announcements

Bob Johnson Free Lunch

Report

REC - Specs

delvisio - Res

Tyler - Enroll Amendment

Other Faculty Announcements

State of College Report

A year ago

Guil

Thanks to you all for your service

The situation is considerably different

& hope you share with me the realization/the feeling that our situation is improving dramatically.

Forward to you some of what has happened:

1. Enrollment Limitation

TYLER / RES / many others

Enrollment 3500 -> 2500

over 2 years

effective Monday!

=> teaching loads.

2. Salaries & Support

state legislative higher edu

initiative - governor -

15 sign/a 91 in Utah

in many years.

State of the College

4 years ago we met here under very different circumstances:

1. No salary increase

2. Very high teaching loads

3. Lack of higher admin

4. Uncertainty of V.P.

5. New Dean

6. Faculty resignations

7. Morale problem

in the past year

in the past year

in the past year

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in the past year

3 new "teaching" positions
in CS/EE/ME
& help w/ staff problems
The faculty office
has slowed down! We
still have 10% of our former
positions open, but the
rate of D has ↓
We are searching for efficiency
units have more / I will
replace them

Space: 2 new bldgs
Thanks to L. Lathuan
use/chem E -
chemical related
MEB remodeling
RES report
Space Council bldg -
2 yr old
Space Council
→ research park?
"space is a problem!"
will get tighter
Res ↑ U of A top 30
College n 20
Penn State top 11
As a sign of how much we
are outstanding we
are proud of our independent
Awards - Fac/Student/Resident

Pres. w/ a vision
The great union between
Chicago & West Coast -
Rep'n outstanding/univers
we -
we recall teaching
Econ Dev of State
"sit'n of state ↑
⇒ ↑ support for U
& College in particular
Not only is the sit'n
turned around - we can
all sense feel - growth
& development
It is a heretofore sit'n -
write off the current list

The next year -
Equip. Administration -
State Adv Council
Special Leg. Secrecy
Special
Regular Session
Econ Dev / Sp. off. Co -
Area position
College "
Community involvement
And it's
Asst Dean for Adv Polns -
and Liaison
input support ← people
great
st
Political

Local Prof Groups
And Meds -
Cont' Energy Educ
Genuine interest -
Speakers Bureau
Capacity support of U &
College → legislators
→ action
Fact Kit for Speaker
Vario/College
U of A College Adv Council
Net! " "
Centers - And Support
Under Dept / Under College
collaborate build on our
strengths

Maintain & expand our
strength -
strengthen our weakness
world new areas based
on 5 years of
College Council committees
for discussion to find
weak - inner & creative
solve technical problems
It will take hard work
to communicate w/
the state - industry -
w/ the community
we all must do it -
that's my major object
between now & January

Don't let university & sponsored
units - need to vision
to goal - open minded -
attitude - for teaching vision
I show the Pres. vision
& optimism
We are already ^{achieving} ~~growing~~ in
certain specific areas -
we are not yet recognized
adequately as a great college
Tennessee - we will be
I look forward to
working with each &
members of you in
the year ahead to
accomplish this goal -
L. Vach -
Questions -

Faculty, College of Engineering

5 October 1984

J. D. Andrade

Update, Fall-1984

National Technological University (NTU)

Dr. Lionel Baldwin, former Dean of the College of Engineering at Colorado State University, Fort Collins, and President of the new National Technological University, will give a seminar on the NTU, Tuesday, October 9th, 4:00 p.m., Room 3176. Refreshments will be served prior to the seminar.

NTU is a totally new development in master's level graduate engineering education in which courses from participating schools will be delivered via satellite to any location in the nation, permitting engineers in industry to obtain Master of Engineering degrees from the newly accredited NTU. This concept has a significant long-range impact on the whole field of continuing engineering education. I urge you to attend Dr. Baldwin's seminar and to learn firsthand the philosophy, operation, and future plans of this new University.

Continuing Engineering Education

As an urban university in a very rapidly growing area of the country, we have an obligation and responsibility to provide continuing engineering education for the local engineering community. This has been nearly impossible because of the lack of adequate resources with which to perform such functions. I have requested in our budget to the University significant funds to specifically develop and carry out continuing engineering education programs. Until the State chooses to subsidize these programs, the full cost must be borne by the industries involved.

Sperry has indicated a strong interest in the development of a Master of Engineering program in Electrical Engineering. Discussions are presently underway between Sperry, the Department of Electrical Engineering, and the Division of Continuing Education. Clearly, the participating industries must make a long-range commitment to pay for the full cost of the program during its entire duration, enabling the resources to be guaranteed to provide the faculty and staff support necessary to carry out a quality program. We expect the Sperry/Electrical Engineering plan, once implemented, to serve as a model for other firms and programs, particularly Mechanical Engineering, Industrial Engineering, and Computer Science.

The College's Continuing Education Committee is looking into these issues. I urge you to contact your representative to that committee to present your input. The College Council will also be discussing these matters in some detail.

Public Relations

University professors often have little contact with the non-university community which is expected to nourish and sustain the university. If we expect the Utah community to expand its support and commitment to the University, we must make them aware of the University's importance and benefit to the State and region. This requires communication. It requires more than communication from the President's Office. It requires more than occasional press releases to the local press. It requires considerable effort and commitment.

The Public Relations Department at the University is now totally reorganizing its old Speaker's Bureau. The Dean's Office has been working with Ms. Jane Provost, who has been appointed to coordinate the Speaker's Bureau. I have supplied her with a list of faculty who might be interested in speaking to audiences of businessmen and industrial and technical leaders in the community.

I also encourage your participation in local professional engineering and related societies in order to facilitate communication between the College and the local community. I urge you as private citizens to provide input as you see fit to other local community groups, to the local press and media, etc.

The Dean's Office is putting together a speaker's kit of a dozen or so transparencies which provide statistics and facts on the University and the State which you may find helpful during your speaking commitments within the State.

As you talk with your technical, business, and industrial acquaintances in this State, please let them know that I, or other representatives of the College, would be willing to speak to groups or to meet with them individually any time at their request to inform them as to the activities and accomplishments of the College, as well as its needs and problems.

Marvel Leader has agreed to coordinate public relations activities in the College and she will be working closely with the Public Relations Department in providing press releases to the local media. If you receive a new grant or contact, an award, a special invitation, have a student honored, or any other appropriate news-worthy development, please inform her so that we can arrange for the proper press coverage.

The College's Public Relations Committee will begin meeting shortly. Each department will be expected, through its representative, to inform the Dean's Office of all activities which should merit local media exposure.

Visitor Coordination

The Dean's Office would like to assist you with visitors, particularly those who would be of interest to more than one individual and/or are relatively influential in the business/industrial/academic community. Please inform Marvel if you expect a visitor in the near future, particularly if you require assistance with arrangements and if it would be appropriate for the individual to meet with a representative from the Dean's Office.

All seminars should be appropriately announced to all relevant departments and components of the University and in the University-wide Campus Calendar. Too often technical seminars appear to be intended for only local, private consumption, and often many individuals who would have an interest in the visitor and his talk are not informed nor aware that it even occurred.

Intermediate Status

The new intermediate status plan to contain engineering enrollments within the acceptable bounds necessary to provide quality education have now been implemented. The long lines were largely gone this Fall quarter and section numbers and sizes are decreased. The full effect of this plan will not be felt until Fall of 1985.

In addition, there has been significant coordination in the teaching of subjects which overlap several departments to minimize duplication and enhance the student's educational experience.

Clearly, in many areas of the College, our teaching loads are too high. These should be decreased to tolerable levels with the full implementation of the enrollment limitation plan, effective a year from now. The Dean's Office will be reviewing the teaching loads throughout the College, as well as research and professional activities, to assure that no one component of the College is carrying an unfair burden.

Outlook

I am confident that the new University Administration is responsive and aware of the needs and accomplishments of the College of Engineering. We will be working together in an effort to convince the Regents and the State of our severe economic problems and of the resources we require to provide a quality engineering education for the rapidly growing numbers of students wishing to study the profession as well as to serve the rapidly growing professional engineering community in the State.

Please do not hesitate to call or stop by at anytime to discuss these or any other topic of mutual interest. I look forward to working with each of you in what I am sure will be a most exciting, productive, and rewarding year.

JDA/ag

Update Memo/letter

FACULTY MEETING

23 January 1985

Announcements:

Chair Searches

Hoepfner, M&IE (external)
Civil (external)
Bioengineering (external)
Electrical Engineering (internal)
Materials Sci. & Engr. (external)
Computer Science (acting)

Pre-engineering Education Workshop

Summer School

Publications

Bulletin
Directory
Update

State Industrial Advisory Board

Industrial Interactions
Continuing Education/Workshops/Tutored Video

Commitment : CS / DARA - remodeling
EE / Sperry -
Research -- KLD ↑ # & quality / ~~CS~~
MSE
AIC

Space/Facilities -- JDA

CS remodeling, etc. now
4th floor penthouse -- gov. list -- summer
Bldg. 2) in process
Bldg. 61)
New -- private, donation, state

Legislative Initiatives

1. General Budget
2. Special equipment
3. Centers for Technological Excellence -- econ. dev.
4. Future -- State Master Plan

Other

DEAN'S OFFICE
UNIVERSITY OF UTAH
COLLEGE OF ENGINEERING

MEMORANDUM

TO: Faculty and Staff DATE: 11 March 1985

FROM: J. D. Andrade *J. Andrade*

SUBJECT: Update

1. Legislative/Budget/Funding:

There is both good and bad news in the University's budget allocation. The good news is that funds are provided for an average 6.67% increase for faculty and 9.0% for staff. The bad news is that there is no money for growth, open position upgrades, etc. Both the Vice President and I will have to use some of these funds for urgent University and College needs. The Chairs will allocate a major part of those funds, I will allocate some, and the Vice President will allocate his funds largely in response to special needs and requests. Your Chairman will soon be asking you to provide data for salary evaluations according to a set of guidelines recently discussed by the College Council. All faculty and staff must provide the data requested in order to permit a rational and objective salary review. All salary increases will be based on merit and performance in the three categories of teaching, research, and service. Faculty are expected to be good to outstanding in all three areas.

The University budget includes one-time monies for undergraduate computer education and undergraduate laboratory equipment and facilities (\$700,000 and \$400,000, respectively). Your Chairman and I will be making strong cases for a major part of those funds.

The bill establishing Centers for Technological Excellence in Engineering Research passed the House and Senate and is awaiting the governor's signature. The bill (House Bill 255 by Rep. Don LeBaron) endorses the concept that State economic development funds be used to fund interdisciplinary engineering research in areas targeted as important for economic development. Guil Funston and I will be working closely with the State Department of Community and Economic Development in applying for those funds. The funds will be used to match Federal, industrial, and private support and will likely be one-time only money. The intent is to use funds primarily for equipment, facilities, staff, and student support. The College's State Industrial Advisory Board was instrumental in supporting the bill and aiding its passage.

Centers tentatively identified and listed in the supplementary material with the bill include: Biomedical Design, Telecommunications, Microelectronics, Composites, Controlled Chemical Delivery (joint with Pharmacy), Industrial Robotics and Factory Automation, and Sensors.

Other good news: Effective July 1, 1986, the University will be able to retain 90-95% of all indirect costs (The University now keeps 50%). We are now working with the Administration on mechanisms for the allocation of those funds. Your views on this subject should be directed to me and to Vice President for Research, J. Brophy.

The Legislature also funded the remodeling of MEB's 4th floor east as expansion space for Computer Science and for 11 offices. The remodeling of basement space due north of the HEDCO Microelectronics Lab was also funded--to be used for thin film optics and opto-electronic materials and device work.

Master plan: We are now preparing a master plan for engineering and science at the University for the next 5+ years--to be presented to the Regents by July 1, 1985 as part of the 86-87 budgetary process. I am hopeful that the Regents and the State will agree to funding a controlled growth in the College of Engineering for the next ten years or so.

2. Chair Searches

These are proceeding satisfactorily. We expect to have Chairs named in Bioengineering, Civil Engineering, Electrical Engineering, and Materials Science and Engineering in the next one to three months. I will begin working with the Computer Science faculty to select an Acting Chair, as R. Riesenfeld will be on sabbatical leave next year.

3. Gould Computer

We now have ordered a Gould 9080 dual processor computer. Thanks to the efforts of Computer Science and Gould's interests in interacting with Computer Science, the \$750,000 machine was obtained for \$250,000. The machine will be used up to 40% for VLSI/Microelectronics research and instruction, up to 25% by Computer Science, and the remaining time will be allocated by the College Computer Facilities Committee. This one machine will increase the total computation power in the College by several times. The machine will be tied to the C.S. Ethernet, as well as to the Computer Center network. Operation and management plans are now evolving and will be under the supervision of the College Computer Facilities Committee. The Park Building provided \$90,000 in special funds, \$30,000 from the Institutional Funds Committee, \$15,000 from Electrical Engineering, and the remainder from College funds--primarily development funds. This purchase has bankrupted the Dean's Office for the current fiscal year. We will be allocating appropriate staff support, student fees, and other resources to permit proper operation and maintenance of the facility. R. Frank will oversee operation and management for the College through the Dean's Office. The unit will be housed in the Computer Center Machine Room and should be delivered late this month and operational in late April.

4. Supercomputer

The University now has access to a supercomputer as a member of the San Diego Supercomputer Consortium. Congratulations and thanks are due to F. Hoppensteadt, Chairman of Mathematics, and Bob Smith of Geology and Geophysics, for organizing the University of Utah's participation in the Consortium. For further information, contact Hoppensteadt (7870).

5. Workshop on Pre-engineering Education in Utah

The event was held February 22-23, 1985, was a success--every school in the state system of higher education was represented, as was BYU. A complete report and list of recommendations is available from your department office or the Dean's Office.

6. Teaching vs Research

I've been told that many faculty are concerned that "teaching doesn't count" and only research excellence is being rewarded. Research excellence can be readily measured via publications in referred journals, research prizes and awards, and research funding. Teaching excellence has not been readily measurable, except for outstanding teaching awards. The College Council is now developing a means for the evaluation of teaching effectiveness and excellence. Such evaluation will be a major criterion in merit salary increases (see Section 1 above). All of our faculty who have been recognized as outstanding teachers have indeed been rewarded via the salary mechanism, just as have our outstanding researchers. Given our limited budgets, it is not possible to provide significant salary increases for average researchers (particularly if they are average to poor teachers) or for average teachers (particularly if they are average to poor researchers). Please do your part to recognize those faculty who are exemplary in teaching, research, and/or service by nominating them for appropriate awards and by informing your chairmen and deans as to their accomplishments.

7. Wrap Up

In general things look good. We are poised for significant growth and expansion in the next several years. Our teaching loads are becoming controlled--although we still have a long way to go. You can help by encouraging your departments to eliminate or at least consolidate courses to decrease the total number of courses offered. Our salaries are still lower than our peer schools. Our research support is increasing, and there is now a good chance the State will play a key role in funding research and development. Finally, the overhead return situation looks very good after 7/1/86.

Thank you for your teaching and research excellence, your service to the College and University, and for your cooperation, friendship, and support. Your input and suggestions are encouraged and needed.

JDA/ag

Fall 85 Faculty Meeting

WELCOME!

State of the College - 1985

YPAR Pres'n / Depts

YPAR Enrollment / Teaching Loads

2 yrs ago 3400 students

hi teach loads

little staff support

Crowded facilities -

Enrollment control plan - L Tyler (UES) →

Last year ↓ this year down to Next year

⇒ teach loads which are still too high
but improving

Gone from ave of 6-7 3 credit courses / year to

~ 5 by next fall

Goal is 4 -

with reasonable
the program.

Well kept tightening enrollment until we reach
that goal.

Master plan - 10'

TA & staff support - still a major problem -
no relief - remains hi priority

Salaries

2 yrs ago - 0 increase!

1 yr ago - helped significant ~ 1/3 of fac.

this year ~ 4-5% even increase - no fac -

Our salaries are ~ 15% ↓ per schools

still a problem - still a priority

Chairs Many chair terms up ~ same time ⇒

of 6 month chair searches:

Civil / MSE / MORE - ext

internal EE / bio

no chair search this year - although 2 next yr.

Thanks to
all chairs
past &
present

We also improved compensation packages for
all chairs - basically 10 month salary -
as most other major schools do.

Legislative / Community -

2 yrs ago - new President - more open - interactive
w/ community & legislative

College admin started to get the word out that we
are interested in interact w/ vid.

Individual depts & fac had good interaction but
there was little initiative or leadership from Admin
from Dean to the Pres. - Changed dramatically
about 15 months ago → Asst Dean I R.

Civil Forum - liaison w/ vid.

→ Utah and Adv Bd - 20 Utah cap state

CEO / Pres / VP - Nov meet Center for

Tech Exc - Legislative / Government Econ Dev -

LeBaron HB → law! Gov signed

5M Econ Dev - 2.5M → program!

2.5M in state we \$ from idea to funding
in < 12 months! Not bad -

One time - renewed contract program?

State Adv Bd very active - they are pleased w/
this success - want to do more.

Some of you involve legislator - ~ 30 met
& discuss college needs - role of energy in econ dev.

also industry - speaking - local engg groups

~~for~~ We all have a resp. to interact with
the state - local societies - local industries

XPAR
Schools

Master Plan / Econ Dev.

Pop'n growth - demand
Econ dev
need for enrgy
doubling by 1975 ?
new bldg ?

XPAR ?

Other

MEP - Trivello/Benson.
Student activities
Enrgy Week
Displays - MEB interior place.
Computer access -
collaborat - ~~review of text~~

XPAR

This year specifically

5 paces / MEB - Res Park - other
Computer Network
Launch Center for Tech Exell -
↑ volun / interest / support from ind.
fund campaigns for
fellowships
facilities
Foundations -
Alumni development
Legislators / Govern / city → econ dev. / overhead return.
w/ stable enrollm - even if no growth →
program innovation - ABET -
interdisc programs ?
curriculum improvement / streamlining /
interdept collab'n / shared labs - staff - faculty
Council - active - review of ten fac.
evaln of teaching / improvements
expt with TV Dist -

Show

Public Office

Iran Welsh.
Res Directory
update
Enrgy News
Ceniter Brochures.

XPAR

Research -

Up 15% → > 8M
20 in nation
~ # 11 on a per capita basis
one of most prod. in nation !
Most schools ~~Res~~ Res < 1 ~ 1:1
state

One ~ 1.5 : 1 Very few schools are better → bargain for state.
Expect all fac to be excellent in res ≠ teaching
Good res not excuse for poor teach > ⇒ both
Good teach " " " " res
Res ⇒ tech transfer - spinoff → econ dev - message is getting out!

Facilities

~ 50% of 1 time pool for the labs - admin -
This Bldg - face left
4th floor project
roof
Astr class Rm Bldg
Energy Min Res center
Old Bur of Mines Complex - Ceramic Enrgy Lab
Res Park ?
Exp of MEB ?
New Bldg Plan

MAP
on Board

2 yrs ago we were in a dicey —
faculty were parachuting out!
With a lot of hard work, ~~the~~ admin & legal support,
optimism — we've pulled out — were flying
level & under control.

Thank each & every one of you for your
high prod. productivity, quality teaching,
dedicated service ~~to~~ — under less than
optimal cond — cond will continue to be
less than opt but improving.

Pay special thanks to our small staff —
tech & admin — ~~underpaid & not always~~
~~as appreciated~~ ^{can't} thank them and recognize
them enough!

I'd like to give special personal thanks
to Manuel Leader & the rest of the DO staff
for keeping me, RES, & techies ~~in~~
their many activities & efforts in behalf of the
College.

XPAR

Today is Manuel's 39th B day
Happy Birthday, Manuel!
After a desc'n period, we will observe an annual
time for the Bob Jacobs annual free lunch
Pls make a particular effort to introduce
yourself to people you don't know.

Now ??

DEAN'S OFFICE
UNIVERSITY OF UTAH
COLLEGE OF ENGINEERING

MEMORANDUM

TO: Faculty and Staff
Meets

DATE: 26 November 1985

FROM: J. D. Andrade *J. D. Andrade*

SUBJECT: Update - November 1985

At the Fall Faculty Meeting on September 27th, I reviewed and summarized the present state of the College of Engineering. An abbreviated copy of those remarks is attached for your information. They are a concise summary of some of the actions, initiatives, and developments which have occurred in the College over the past two years.

On November 4-5 we were visited by a team from the Accreditation Board for Engineering and Technology (ABET), a national engineering accreditation group, to look at undergraduate programs in the College. The Computer Science undergraduate program was reviewed on November 25 and 26.

I am pleased to report that, with the exception of Industrial Engineering, all of our undergraduate programs received a very strong evaluation. Although we will not see the written ABET report for sometime, we are hopeful and confident that it will be strong and highly supportive.

The accreditation team met with President Peterson, Vice President Altman, and me for an exit meeting. They clearly summarized for the Administration some of the problems and needs of the College, primarily its desperate need for additional staff support, as well as equipment facilities and maintenance funds. Although it is clear that we can make some major improvements in our undergraduate programs with the utilization of computers throughout the curriculum and with certain matters of consistency in co-listed and service courses, the visit was generally very favorable.

You are all to be congratulated for your activities and actions in behalf of the College, in particular your excellence in teaching and the general conduct of the undergraduate program.

The President's Plan for Computing, which will have a significant impact on the College of Engineering, is now nearing an implementation phase. The Computer Facilities Committee and the Chairs are being constantly appraised of the developments in that plan.

Remember that the Gould 9080 Dual Processor machine is available to faculty, including those who cannot pay for research computing funds. Limited amounts of free or subsidized time are available. If you have not seen the memos

State of the College Address
by J. D. Andrade

27 September 1985

Two years ago, we stood here with essentially 3600+ students looming in front of us, with exceptionally high teaching loads, with very little T.A. support, and with very crowded facilities. We are still faced with some of these problems, but at least the student numbers have been partially solved. With your help and assistance, we initiated an enrollment control plan, and under the guidance and leadership of Lamont Tyler and Bob Stephenson, the plan was implemented with the Administration backing us.

The total head count in the College in the summer of 1983 was 3600 students. We imposed enrollment limitation at the end of the freshmen year (we didn't worry about the freshmen year because the College only had one or two freshmen courses), dropping it to 3300 students, effective last fall. This fall, there will be some 2800 students, and by next fall we will be down to less than 2600. Teaching loads should be dropping by next fall from an average of six to seven 3-credit courses per year to no more than five 3-credit courses per year for faculty with modest research programs. Those faculty without significant research activity will, of course, continue to teach six to seven courses per year. The goal is to achieve a load of about four courses per year, which is roughly the situation in the Departments of Chemistry and Physics. With your assistance and support, we have the enrollment numbers under control. We will continue to decrease enrollment until our budgetary resources and enrollments are in balance.

We are still in difficult shape with T.A. and staff support. This is still a very major problem and significant relief doesn't appear on the horizon with this current Legislature.

Two years ago, we were standing here lamenting that we had just received a zero salary increase from the State Legislature. One year ago, the University received some substantial help from the Legislature and one-third of you received significant salary adjustments. For the other two-thirds who did not receive salary adjustments, we expected to correct the inequity this past year. That correction did not materialize--the average increase was roughly 5.5%, distributed non-uniformly because there was so few monies available. You are still underpaid, roughly 15% below peer institutions nationally. We are doing our best to improve the situation. Salaries are a major priority within the College and within the University.

We have had a significant number of national chairperson searches this last year, which required significant resources. There will not be any national chair searches this current year, although we will have a search the year after this, which will require a significant commitment.

We improved the compensation package for all chairs. Presently, our chairs are basically on a ten-month contract as opposed to a nine-month contract. (Departments do function during the summer.) Most other major engineering schools have their chairmen on ten- or eleven-month contracts.

Industrial Advisory Board deserve considerable credit. When you meet a board member, please extend to them your appreciation.

Guil Funston and I have met about one-third of the legislators. President Peterson knows them all by first name--we're not quite there yet, but we are getting to know them. They are genuinely supportive and all seem to be reasonable, objective individuals, although they clearly have their political leanings and fiscal concerns. The word and message is getting out, and they are all convinced that engineering education is vital to the future of the State and want to do the best they can, given their fiscal responsibilities.

If ever you have an opportunity to interact with your neighbors, particularly with legislators, please do so. Please inform them of the needs and opportunities of your department, the College, and the University in general. I also urge each and every one of you to participate in the local sections of the major professional societies. A number of the departments do have some representation and have been active, but the majority of faculty are not involved. If we expect the community to genuinely support us, we must demonstrate our genuine interest by participating and getting involved.

To facilitate the process of informing the community, we have set up a Publications Office in the College. Mrs. Joan Welsh directs the publication activities. One of the first publications was the College Bulletin, a source of information for students and other interested persons. The Bulletin will be reprinted this next summer. The Faculty Research Directory which was published last year, provides information on your research activities and awards, along with a picture. The Research Directory has been distributed primarily to the industrial community. The Publications Office has produced a series of publications on specialized laboratories and facilities and on the new interdisciplinary Centers. The College has over 7,000 alumni; the great majority of them have never received any personal contact since they graduated. We now publish Engineering Update, a publication for alumni and friends of the College. Two issues have been published thus far, and it will be published twice a year. Finally, we have published a student newspaper for the past two years to provide news and information to the students. It is distributed the first day of each quarter.

Associate Dean of Research, Larry DeVries, has reported that we are up 15% in terms of dollars--over \$8 million a year. That makes us the 20th-ranked research college of engineering in the nation in terms of sponsored research. We generate on the order of \$100,000 a year in sponsored research per FTE faculty. Clearly, you are to be congratulated because you have been exceptionally productive and effective.

I did a survey a year ago of the Deans of Engineering of the 20 schools that the President and the Regents consider peer institutions. With the exception of one or two, we were the only school in that group whose ratio of research to State dollars was greater than one, which means we are a terrific bargain for the State. We are using those numbers as effectively as we possibly can. I encourage you to use them in your discussions with your neighbors and at the barber shop.

describing the operation of the Gould facility and the forms for applying for that time, please contact Mr. Randy Frank (5591) or Kevin DeFord (8770), Computer Science, for further information.

Room 3028 houses terminals which will access the Gould facility. There will also be some Gould terminals in the hallway which presently houses the Computer Center terminals on the third floor. In addition, the major gift of Hewlett Packard equipment to the Department of Computer Science includes some equipment for general College of Engineering use. A series of advanced HP CAD/CAE workstations will be installed in room 3095 in early to mid December. Further information will be forthcoming from Randy Frank and the Computer Facilities Committee.

The College Council will be deliberating a number of issues this year, including the question of review of tenure and faculty; the measuring and monitoring of teaching effectiveness; the incorporation of material on professionalism, ethics, and related subjects in the undergraduate curriculum; and faculty/industry interactions. If you have opinions or inputs on any of these topics, you are invited to College Council meetings (4th Monday of each month, room 3021, 3:30 p.m.) or get your input to your College Council representative.

During Spring quarter, 1986, one of the sections of 1st quarter Dynamics will be broadcast throughout the entire intermountain area by KUED TV. This activity is a result of special Board of Regents funding to explore the possibility of lower division College of Engineering courses being made available state-wide to two-year and four-year institutions which do not have full pre-engineering programs. The course will probably be broadcast at 6:00 a.m. on Tuesdays, Thursdays, and Saturdays. It will be remotely recorded on a VCR unit at the participating institutions and viewed during the normally scheduled course time at each of those participating institutions. A trained tutor will show the tape, stop it at key points, and elicit a discussion and/or questions and answer session. Credit will be given through the host institution, but the University of Utah Dynamics instructor will be responsible for issuing the grades for the course.

This is an experiment. Those of you who have had experience with video courses are urged to provide your advice and input to Guil Funston, who is the initial coordinator for this project.

Please refer to the attached State-of-the-College address for a comprehensive review and update. I would be delighted to meet with you at almost anytime to obtain your critique, suggestions, ideas, and other input. Please give Marvel a call at 6911 to set up a time at your convenience.

JDA/ag

encl

cc: C. Peterson
I. Altman

J. Brophy
W. Loos

State of the College Address
by J. D. Andrade

27 September 1985

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All faculty must be effective researchers, as well as excellent teachers. Excellent research is not an excuse for poor teaching nor is excellent teaching an excuse for lack of research.

The importance of the College, and particularly its technology in feeding the economic development initiatives of the State, is genuinely appreciated and being discussed in the Legislature and in the corridors of the State Capitol. I am confident that in two or three years support for the College and the University in general will improve significantly.

We are looking at a number of options for continuing to improve and enhance facilities. The facilities now under construction are due to Larry Latman's tenure as Dean. The Instructional Laboratory Building, which is officially called phase four of Merrill Engineering Building, and the Energy and Minerals Research Building were approved and funded over two years ago. We are formulating plans to expand Merrill Engineering Building to the east. A plan has been submitted to the Administration for a totally new structure to house Electrical Engineering and Computer Science. No funds are available for either of these projects. Much work lies ahead.

We have presented a master plan to the Administration for controlled growth in engineering. Let me share with you some figures. Undergraduate engineering production in the State is about 700 B.S. degrees. USU puts out roughly 100-150 a year, and BYU graduates about 300, as do we. Our numbers are significantly up as of Fall, 1985, but the numbers will decrease in the next several years due to our enrollment control plan.

We have informed the State that its economic development plans and objectives are not going to materialize without an adequate pool of engineers. About 70% of our graduates are now employed in the State of Utah. There is a misconception out there that you need to help me correct. Ten years ago, it was the other way around--we were exporting engineers and most of our graduates were going out-of-state. The Legislature doesn't fully realize the situation has changed in the last ten years. Most of our graduating class can be employed within the State in the present economy. A significant expansion of that economy will require many additional engineers.

The message is getting out--Val Oveson, the Lt. Governor and the Department of Community and Economic Development understand the need. We have argued to the University Administration that the College should be in a controlled growth mode. Once we have an appropriate budget for our existing numbers, we can begin a controlled growth, conditional on the appropriate resources. The argument is being heard. Although we may not see significant growth resources in this current legislative session, I am confident the resources will materialize within the next several years.

A minority engineering program has been established, thanks to Ed Trujillo and Roberto Benson. We are encouraging student activities, student professional and honor societies, and Engineering Week activities.

There is now a College computer facility under the direction of Randy Frank. Given the President's plan for computing on campus, we can expect

continuing improvement in the College of Engineering and throughout the entire campus.

The College Council has been very active and has examined the assessment of teaching effectiveness, review of tenured faculty, and other issues, which they will continue to deliberate this year.

This year, the Dean's Office efforts will focus on space and facility needs to house our growing programs, including space for the Centers for Technological Excellence programs. We are also greatly expanding alumni and private foundations.

Please get your creative solutions to some of our difficult problems to your Chairmen and to the Dean's Office. We will do the best we can to implement them. One example is the concern with the maintenance of the building. Although it took two years to get that message across, the building is now a much more attractive place in which to work.

I would like to personally thank each and every one of you, not only for your patience and support, but primarily for your output--for your excellence in teaching, in research, and in service. I would like to pay special thanks to the small staff in the Dean's Office. They have worked under very difficult conditions and with very limited resources in trying to get some of these programs launched.

Welcome to the 1985-86 academic year. I look forward to continuing to work with you in enhancing and expanding the excellence in the College of Engineering.

Fac Meet
11/29/85

Dead Week
 Finals Week

Progress Report on College:

5 months -
 1 month old admin
 4 months new

Admin Responsive, positive, creative -

Priority 1: enrollment limitations & plans -

[Transparency]

Working on Growth Plan.
 strategy establish base - 1980 level.
 ↑ enrollment ⇒ ↑ FTE & \$ (incl TA)
 productivity

Priority 2: salaries/incentives

low salaries ⇒ low fac morale.
 how to ↑ salaries in a period of 0 increase? Afflict.
 * main effort on equity salary ↑ effective July 1
 Faculty/Staff awards - Admin pledged up to \$100K
 { Fdn request ~ \$50K/yr in awards
 Alumni request ~ \$50K/yr in awards
 Summer salary - see \$
 dev fund \$
 \$/tu spec. College projects
 Suppl via DCE to those faculty interested -

x par of awards

Priority 3: non state \$ new proj/seed \$ / summer sal / travel, other

Industrial interact:
 affiliates
 Special Centers
 other

- CAO/CAM/Robotics Jacobson
- Optical Science Christensen
- Microelect Hieber
- Composite Denak
- South Field - G Hill
- Nuclear Sandquist

Alumni

Foundations

State

Space

Bldg A
Bldg 1-5 } 1/84
MEB } ext remodel.
New Bldg ? for enrollment > 3500

Publications

End affili
Coll. Bull
Univ - And. Forum Center
Student Newsletter
Res Directories
Alumni Newsletter

Current Issues/Projects

- Computer Eqpt/Facilities
micro PC - ?
Mainframe - DEC
College Net HP
- Energy Work - Disposal
- AS&E
- CAI / Service Center
- Computer Educ - CS

f) 5-Year Plan —
Dept Threats —

Seminar Series :

Biochem / Biotech —
CAD/CAM / Robotics
Other

Council

Adv. Group
Sounding Bd —
Needs to function —
I can't discuss everything w/ all faculty
need represent. body. ⇒ Council

Exec Comm - Chairs + D.O.

SAC / Student Organs

Staff ?

Advice — Volunteers — Contacts

Fac Meet Agenda

~ 5 month Prog Report :

5 year plan -

- Depts
- Multidisc Centers / Programs
- 10% / 15% growth rates plan -
- And. Future
- affiliates
- Centers
- Computer Service Courses ?

Awards List - College Council
Advisory Group -

Committees:
Autumn. Envr - deves

Publications

- and affiliates
- Bulletin
- Res. Directory
- Centers
- Student Newsletters

- CAD/COM/Robotics - Jacobson
- Composites - Duvak
- Optical Sensors - Christensen
- Microlect - Huber
- Synth Fuels - Hill
- Nuclear E - Sandqvist
- AFTER - Microwave - Ceron

Alumni

- Appeal letters
- Univ
- Mine
- Personal

- Enrollment Limit
- Service Courses
- Teaching Loads

Computing

College net -

Space : Remodeling - AEB
Bldg # / Minis } RES

Instruction - study
Energy Week

New bld
Lecture Series :
Biotech / Biochem
CAD -

VPA

DEAN'S OFFICE
UNIVERSITY OF UTAH
COLLEGE OF ENGINEERING
MEMORANDUM

TO: College of Engineering Faculty and Staff
DATE: 14 February 1986

FROM: J. D. Andrade *J. Andrade*

SUBJECT: Update--February 19, 1986

ENGINEERING CLINIC

I am pleased to report that Dr. Magdy Iskander, Professor of Electrical Engineering, has accepted the position of Director of the College of Engineering Clinic program. This program, which has been under discussion in the College Council and the Executive Committee for the past year, is modeled after the Harvey Mudd Undergraduate Engineering Clinic/Project program. A description of the program is enclosed for your information. Basically those departments who elect to participate and have an undergraduate thesis or project requirement will work to obtain industrial projects and industrial sponsorship of those projects. Teams of students will work on the appropriate projects, supervised by faculty, as well as by the industrial sponsor. This program will give both our students and faculty considerable industrially related experience, provide funding for undergraduate laboratories and general department needs, and provide closer interaction and liaison with local and national industry. It is expected to provide significant consulting opportunities for faculty and employment opportunities for students. Please read the attached description of the program. If you have any questions, suggestions, and/or interest in participating, please contact M. Iskander (6944).

THE PRESIDENT'S PLAN FOR COMPUTING

The campus-wide computing plan has continued to evolve rapidly. It is now in the process of being implemented in many components of the campus. In order to make maximal use of the limited resources available under the plan, the College of Engineering has agreed to incorporate the Gould 9080 Dual Processor Minicomputer into the general campus plan. The Gould will be shared by the College of Mines and Mineral Industries and the College of Engineering. In order to facilitate this sharing process, a network is being established between the two colleges, as well as with the College of Science. The three colleges will be fully networked probably by midsummer. All of the major machines in each of the three colleges will be accessible via the net, although the major super mini for College of Mines and Engineering use will be the Gould.

A joint Intercollege Computer Committee has been established. That committee is chaired by Dr. Thomas Stockham, Professor and Chairman of Electrical Engineering. Other College of Engineering members on that committee include: Dr. Sandy Meek, Mechanical and Industrial Engineering and Dr. Bob Seader, Chemical Engineering. That committee will be responsible for the management and operation of the intercollege Gould facility, as well as for the management and operation of the network between the two colleges.

The specific details of network implementation between the three colleges are being worked out by a group consisting of Mr. Randy Frank, representing Engineering; Mr. Dave Cameron, representing Mines; and Mr. Doug Henry, representing Science. Specific implementation plans will be reviewed by the Intercollege Computing Committee and the three deans very shortly, and it is expected that implementation will begin as early as the next four weeks.

The funding for the network between the three colleges will come from the Research Support Committee's (Institutional Funds Committee) spring quarter allocation, which means there will be no institutional funds competition. The next institutional funds deadline will be August 1, 1986.

The President's plan includes a hardware allocation to the College. These funds are derived from the new campus-wide student fee program. The funds are to be used exclusively for equipment whose primary purpose is for educational computing. The College Computer Facilities Committee and I, with the advice of Mr. Randy Frank, are now deciding on the allocation of those funds. Portions of the funds have already been allocated to Chemical Engineering, Civil Engineering, Electrical Engineering, and Mechanical and Industrial Engineering for the purpose of setting up local timesharing facilities for advanced engineering education in those respective areas. A small amount of the total funds may be used to complete networking in the College to permit all computing resources to be accessed from all components of the College. The funds available from the President's Computing Plan are being matched and leveraged in different ways, principally by industrial and alumni support.

Any faculty member who has interest in learning more about these activities, is encouraged to contact me, Mr. Randy Frank or their department representative to the College Computer Facilities Committee.

LEGISLATIVE UPDATE

The legislature is now in mid session. As you have gathered from the local press, the budgetary situation with respect to the University is not particularly bright. We probably won't have an accurate reading until nearly the very end of the legislative session. It is important not to be too pessimistic or morose about the situation because it is clear that the Governor is beginning to lay the groundwork for significantly increasing support to public and higher education in the next session. You may recall he made a campaign pledge not to raise taxes for two years. We are now in the second year of that pledge. So although this particular year will be tight, the next several years should be considerably better.

There has also been significant moves by the College and by the Governor to discuss the possibility of increased tuition for the University, possibly even a differential tuition for engineering. We are continuing to press such arguments and discussions. The differential tuition discussions and initiative which the College raised late last fall were proposed too late to be incorporated in the normal budgetary and legislative process. It is hoped that considerable public discussion of those issues from now through next fall will have significant impact on the University's, the Regent's, and the Legislature's deliberations between now and the

next session. So although you should be ready and braced for a very tight budget for 1986-87, we really should be very optimistic regarding 1987-88 and beyond.

You surely have heard about the 1.1% budget cut which the Legislature has mandated on the University. That cut amounts to about \$51,000 in engineering and the cut was allocated very disproportionately to two departments, largely because they have a number of open positions. We are arguing very strongly with the Administration that in the event the University's cut is indeed implemented, engineering should be spared, and there is some hope between now and the end of the legislative session that the cut may not materialize or at least may be significantly less than mandated by the Legislature to date.

The President's initiative on indirect costs is now being discussed as part of the University's funding authorization package from the Legislature. If that initiative is successful, and there is indication at this point that it will be, the additional revenues available will make a significant impact on the research activities of the College and the University in general. A percentage of those funds will most likely be allocated to the departments.

SPACE

The difficult space situation in the College is continuing to make slow improvement. By the time you receive this, the fourth floor east should be ready for occupancy. Most of that fourth floor east has been allocated to the Department of Computer Science to house its expanded research activities. A number of computer science faculty and staff will be located up there, as well as significant computer and workstation facilities. The south end includes 11 faculty offices, including several offices for visiting faculty. The bad news is that the fourth floor is somewhat difficult to access through narrow stairways and no elevator is available.

Progress is continuing to be made on Phase IV MEB, but construction is already behind schedule, and it is frankly unlikely that we will be able to occupy it before summer of 1987 (in my estimation). We are proceeding with plans to reassign and remodel much of the existing classroom space in MEB at that time. If you have major thoughts or needs regarding that space, please be sure that your chairman is informed right away, as much of the space has already been allocated.

We now have faculty offices in Building 1 of the old Bureau of Mines Complex and the research laboratory space in Building 2 is now beginning to be occupied by Materials Science and Engineering. A dedication and ribbon cutting of Building 2 will occur sometime in early spring quarter.

LITTERING

We need help with the problem of littering in the classrooms. Please ask your students immediately after each class to pick up their trash and please function as a good role model.

CENTERS OF EXCELLENCE PROGRAM

The State Centers for Technological Excellence program, which the College's Industrial Advisory Committee was very instrumental in proposing and implementing via the Legislature and the State's Department of Community and Economic Development, should be announced shortly after the Legislature concludes the current session. A number of such centers will be funded at the University, particularly in the College. There is now a bill before the Legislature, House Bill 297, to renew

and continue the Centers for Excellence program. You are urged to contact your legislator regarding possible support of the centers initiative.

PUBLICATIONS OFFICE

Ms. Joan Welsh, publications director for the College, will be leaving us on or about March 1. We are now interviewing suitable candidates for her replacement. The major publications project for the College during spring quarter will be the revision and publication of the second edition of our Faculty Research Directory.

COLLEGE COUNCIL

The College Council agenda for the remainder of the academic year includes two key issues--1) We expect to have the final process and document for the review of tenured faculty, and 2) a mechanism for the optimum evaluation of teaching effectiveness. New projects which the Council is now considering, and which probably will continue over into the next academic year, include faculty/industrial interactions and professionalism in curriculum.

VIDEO COURSE

Dynamics I, taught by K. L. DeVries, will be offered throughout the KUED broadcast area, spring quarter. This is part of a new Regent's sponsored program to improve pre-engineering education offerings throughout the State's system of higher education. Students from other components of the higher education system will register through their host institution to take Larry's course. The course will be broadcast at 4:30 a.m., Monday, Tuesday, Thursday, and Friday, beginning 4/1/86, remotely taped, and replayed on site during the regularly scheduled classtime. On-site tutors will work with the students. Larry and his T.A.'s will be responsible for all examinations and for determining final grades. You are, of course, welcome to watch it and even tape it.

FINAL NOTE

Time and commitments this academic year have not permitted me to schedule individual meetings with each of you. I am eager to obtain your input and advice and your creative solutions to the College's problems and opportunities. Please do not hesitate to volunteer such at any time. Thank you for your teaching, research, and service excellence and your support in behalf of the College of Engineering.

JDA/ag

encl

cc: M. Wadsworth
I. Altman
O. Rothermich
A. Morgan
W. Lóos

L. Robertson
L. Newell
J. Brophy
W. Gneml
S. Kim

UNIVERSITY OF UTAH
ELECTRICAL ENGINEERING DEPARTMENT
January 27, 1986

IMPLEMENTATION OF THE ENGINEERING CLINIC IDEA IN OUR COLLEGE

Project-method of learning has for a long time been recognized as a very valuable and effective method for preparing students for their challenging engineering careers. It gives students experience with practical constraints (time and resources), and helps them apply their theoretical knowledge to practical situations. It also improves students' ability to identify critical features of a problem and sharpen their skills in preparing reports and in making verbal presentations. With today's fast technological advances, the gap between the academic engineering training and realism of engineering is widening, the matter which makes the successful implementation of a project method an essential part of our engineering education.

Proposal

We propose that the College of Engineering establish an Engineering Clinic through which the College would seek industrial support for undergraduate projects. A fee of \$25,000 per project will be charged for providing the service to clients (industrial firms) as well as to help support the undergraduate education in the College. Students will perform the service (i.e., do their undergraduate projects) for its educational value as well as for academic credits. Faculty will participate in project teams for teaching credits. Neither the students nor the faculty will receive money directly from the projects. The raised funds will be used to:

1. Cover the projects' expenses
2. Maintain and upgrade our undergraduate laboratories
3. Hire new teaching faculty to alleviate the increase in teaching load
4. Establish departmental development accounts.

An initial estimate indicates that the gross income to the College from the clinic program when in full operation is approximately 1.5 million dollars. The estimated net income for the College is as high as one million dollars. This university-industry educational program should also provide the following additional benefits:

1. Establish ties with industry
2. Help start up companies in our state
3. Motivate and provide consulting opportunities to faculty, and
4. Expose our curriculum to the realism of engineering practice.

Implementation Procedure

With this proposal, we seek the College of Engineering's approval to initiate the College implementation of the clinic idea. The adoption procedure will involve the following:

1. Development of a brochure that describes the College facilities and its commitment to the clinic idea.
2. Development of a video tape that sells the program to industry.
3. Utilization of the above items to present and aggressively sell the program to in-state and out-of-state companies.
4. Conduct an in-depth study on the impact of implementing the clinic idea in our College. Items such as its impact on our teaching load and procedures for adequately rewarding the faculty will be examined.

We intend to report our findings to the faculty periodically in College-wide seminars.

The College commitment to the clinic idea and your council's support of its implementations are considered crucial for the start of the program.

COLLEGE OF ENGINEERING FACULTY MEETING
15 May 1986

AGENDA

1. Welcome

2. Introductions

3. Announcements:

R. E. Stephenson
Gehlich/Bryner
Guil's resignation
CS Search
Convocation

4. Research Update

5. Bad News:

0 budget year
building delay

6. Good News: Overhead

Building
Hedco Dedication
Engineering Initiative

Geo - Munnich
Chem - Baer
Civil - Bryner CS - Smith
EE - Stock
MSE - d. H. H.
MIE - Hooper

DE. Microarray Program / M. Heritage

Network

DEAN'S OFFICE
UNIVERSITY OF UTAH
COLLEGE OF ENGINEERING

MEMORANDUM

TO: Faculty & Staff
College of Engineering

DATE: 19 June 1986

FROM: J. D. Andrade

SUBJECT: Update, June 1986

The Bottom Line--Convocation

If there is one event which demonstrates the mission and beauty of the University, it is Commencement and Convocation. The real bottom line for all of our efforts and activities is the graduation of outstanding students--a new generation of leaders and doers. Those of you who participated in the festivities know what I mean. If you didn't have the opportunity to participate, please do so next year--it will be a most rewarding and fulfilling experience.

Salaries and Budgets

The bad news is that the 1986-87 year is very tight. It is essentially a zero salary increase year. It is clear that significant salary adjustments must and will be made next year.

Next Year--The Engineering Excellence Initiative

The good news is, although next year (1987-88) looks tight with respect to existing revenues, the Governor and the Legislature will surely consider significant revenue increases for public and higher education. Our Excellence in Engineering initiative (copies available in the Dean's Office) has been enthusiastically endorsed by the College's Industrial Advisory Board and is now being studied by the University Administration and others. Basically the Initiative requests a significant base budget increase for Engineering to solve our salary, staff, and equipment acquisitions and maintenance problems. As engineering excellence is vital and indeed is a prerequisite to economic development, the Initiative is being received and supported by nearly all persons interested in promoting economic development and improving the tax base and job situation in the State. I am confident that the Initiative will receive a good hearing and expect it to be supported and at least partially funded for the 1987-88 academic year.

Good News--Overhead

Effective July 1, the University will retain 70% of all indirect costs generated by sponsored research (this current year the number is 50%). These additional revenues are being used to help support the President's Computing Plan, the new Office of Technology Transfer, space rental and remodeling, and new initiatives and opportunities. In addition, a portion of the new and existing indirect costs are being returned to local units to help further research. The President has decided that these funds are to be allocated to the College and administered by the Dean. The College received ~ \$150,000 in such funds in the current year and will receive an additional \$100,000 next year. This represents about 13% of the total indirect costs generated by the College (about 2.0 M/year).

The funds will be allocated as follows:

| | |
|---|-----------|
| Departments (based on % of indirect costs paid from 7/1/85-5/30/86) | \$100,000 |
| Contingency (remodeling, safety, office of Assoc. Dean for Research, College accounting services, equipment rental, and special needs and travel) | 50,000 |
| <u>Interdepartmental</u> College-wide Facilities | 50,000 |
| <u>Industry Interaction Centers and Related Activities</u> | 50,000 |
| TOTAL | \$250,000 |

Your chairman will be discussing with you the appropriate use of the department's portion of those funds. Whatever distribution mechanism each department elects to use, the funds must benefit principal investigator research in a manner at least roughly correlated with indirect cost generation.

Additional overhead funds allocated to the College via campus-wide mechanisms include (annually):

| | |
|---|-------------|
| Research Support Committee (formerly Institutional Funds) | ~ \$100,000 |
| New Faculty Start-Up Funds | variable |
| Research Instrumentation Committee (upgrades) | ~ 30,000 |
| Remodeling | variable |
| Space Rental | variable |
| President's Contingency Fund | variable |
| Equipment Matching Funds | variable |

I am aware of the allocation of these funds across the campus and can assure you that the College indeed receives its "share" of these funds. Most of the overhead retained is allocated to the units generating that overhead. Only a very small portion is used for campus-wide needs and opportunities.

Summer Schedule

I will be out of the country from June 20 through July 20 this summer. R. E. Stephenson will be Acting Dean until July 1. D. Gehmlich will be Acting Dean from July 1 until my return.

Summer Activities/College Council

C. Bryner, Assoc. Dean for Facilities, will be familiarizing himself with our space situation this summer. Please advise him as to your current space occupancy and your present and future space needs and problems.

D. Gehmlich, Associate Dean, will be working with me on setting the College Council agenda for next fall. One of the subjects is the question of common courses in Engineering, particularly at the freshman and sophomore level. Please give your input on lower division engineering education to D. Gehmlich or D. Hoepfner, who chairs a College Council subcommittee on the subject. Other Council committees include: Faculty-Industry Interaction (S. Baum) and Professionalism and Ethics (D. Gehmlich).

Computers and Networking

The Tri-College Net (Engineering/Mines/Science) is now being installed by R. Frank and his coworkers. College local area nets are also being installed and becoming operational. We hope to be well networked by mid-summer.

Computer Science

R. Riesenfeld reassumes the Chairmanship of Computer Science on July 1, upon return from his sabbatical year at Princeton. K. Smith has done a terrific job as Acting Chairman this year. Gary Lindstrom chairs the Search Committee for a Chairperson for Computer Science, to be appointed effective summer, 1987. Please direct suggestions as to candidates to Gary.

Sabbaticals

Faculty on sabbatical leave next year are:

D. Baer, Chemical Engineering (W)
L. Hollaar, Computer Science (A,W,S)
M. Iskander, Electrical Engineering (A,W,S)
J. Janata, Bioengineering (A,W,S)
R. Vyas, Civil Engineering (S)

MEB Renumbering

In September, MEB will be completely renumbered using a new and logical numbering scheme. This will be posted in each department office and posted at other points in the building.

G. Funston

Guil has elected to leave the College on July 1, for a position with local industry. This Office of Industrial Relations has been very effective

and has significantly enhanced our interaction with industry and the local community. A full report of the activities of his office over the past two years is available in the Dean's Office--the activities described include:

- College Industrial Advisory Board
- Centers of Excellence Program
- Master of Engineering Continuing Education Programs
- Pre-engineering Tutored Video Project
- Minority Engineering Programs
- Industry Information Weeks

P. Gerity

Dr. Peter Gerity will assume the position of Assistant Dean for External and Community Relations, effective July 1. His office will incorporate the Office of Industrial Relations, as well as alumni interactions and private foundation fund raising. Please welcome Pete and help him become acquainted with your activities and interests.

Safety Seminar

The annual Safety Seminar will be held Thursday, September 25. Please encourage your students and staff, as well as new faculty to attend. Notices are posted in department offices and throughout the building.

Fall Faculty Meeting

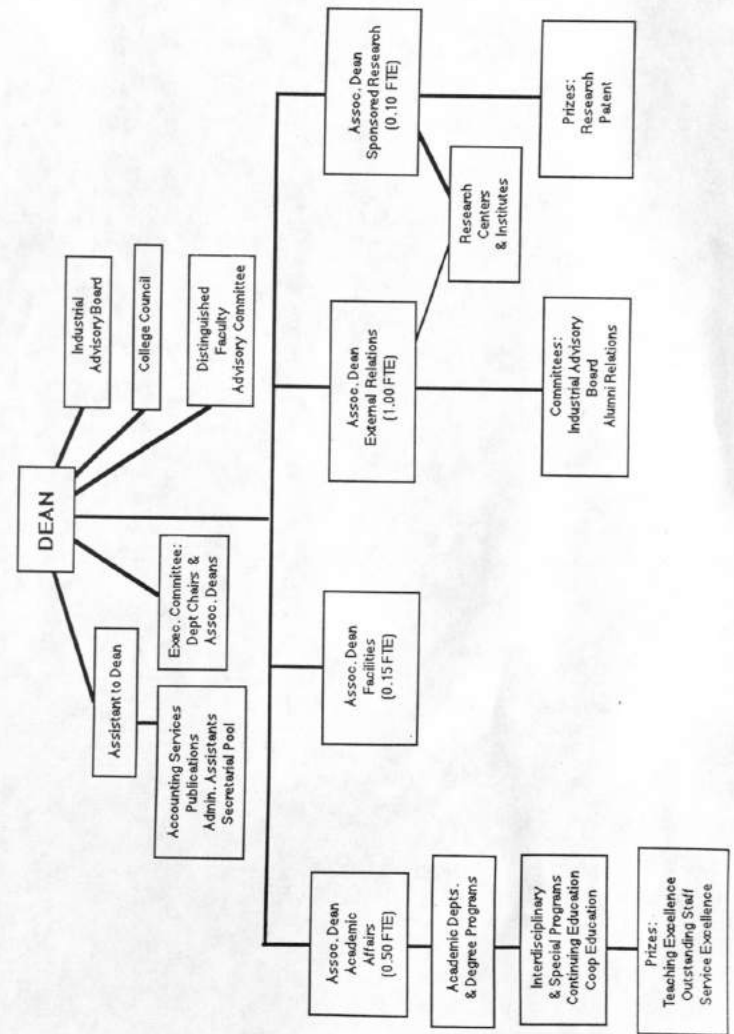
Fall Faculty Meeting will be held in Room 3176 on Friday, September 26th at 10:30 a.m. The annual Bob Jacobs Free Lunch for faculty, graduate students, and staff will be at noon at the southwest corner of MEB (outside). Please try to attend.

Thanks

Thanks again for your excellent teaching, research, and service in the College and University. I hope you have a pleasant and productive summer.

JDA/ag

ORGANIZATIONAL CHART
College of Engineering
University of Utah
(Effective July 1, 1986)



University of Utah
COLLEGE OF ENGINEERING
FALL FACULTY MEETING
 26 September 1986

AGENDA

Welcome -- J. D. Andrade

Introductions

Administrative and Student -- J. D. Andrade
 (Assoc. Deans, Gerity, Heritage & Robert Rainey)

New Faculty -- Department Chairmen

Awards: Pershing / Act Deans of Eng'g Sch --

- Outstanding Teacher (Stockham)
- Outstanding Teaching Assistant (Stephen Gilbert -- CS -- asst. by RFR)
- Outstanding Staff (Vickie Jones -- ChE -- asst. by ALT)
- Patent (Gerity will present to Barry Hanover)
- Faculty Service Award

(mention RES and review of convocation; emeritus appts. were Nordquist and Salt -- mention office)

Next year in SPEC. Emeritus center

Remarks/Update:

Associate Dean for Academic Affairs -- D. K. Gehmlich

Associate Dean for Facilities -- C. G. Bryner

Associate Dean for Research -- K. L. DeVries

Dean -- J. D. Andrade -- State of the College --

ADJOURN FOR JACOBS' FREE LUNCH

bio
 chE
 CE
 CS
 EE
 MSE
 MDE

Pete
 Gerity

Eng'g News
 Bob Jacobs
 Free Lunch

Ed Nordquist
 Dale Sackett
 Emeritus office

new numbers

State of College

9/86

Welcome

4th time I ~~stand~~ speak w/ you at annual fall fac meet. In some respects the sit'n now same as then -- Fall, 1983 -- in most respects the sit'n is very different similarities --

The Bad News.

1. Fall 83 0% sal ↑ & salary freeze. basically same as now now you are ~ 25% under paid
2. 1% budget cut last spring -- We'll talk later about budget problems in current & future years
3. Bldg problems -- still at us
4. TA little increase
5. Staff " "

So what's the good news?

transparency.

1. Teaching loads/students 3700 → 2500
 ↑ quality demand more & more.
2. Bldg & Fac. MEB remodeling Phase III - Engr'g C. Bureau of Mines (completing)
3. Overhead rtn 25% → 75%
 1st time some direct money to depts & P's a start. Matching # pool.
4. Computers -- 3 yrs ago very serious problem real commitment -- Pres plan fees →

Future

state economy

nat'l economy? Sperry

Texas/La/Mich/Minn?

our sit'n ~ stable

don't expect to see major growth
other than via private funding — Public assisted
univ.

We're cut ~~for~~ enrollment

cannot positions

now cutting positions & programs campus
wide

⇒ ↑ quality

We are continuing to get stronger &
better — quality & excellence need even
greater " " " "

Caltech isn't big — but it is good.

Thanks for your efforts —

Jacobs True Lunch

Questions

5. research productivity

h. per capita \sim \$100,000/FTE

\sim 20 in nation (engry)

hard work.

6. And Felix ↑↑ And Adv Bd

State Center of Exall —

State commitment to engry →

Genity

7. Dev. Efforts — Capital Campaign — President

Genity

8. Student activity ASCE

~~9. New inst~~

Budget cut/Realloc.

In general good news —

57-88 ~~to~~ 6% / 10% 90

Salaries

Strategy is to ↑ taxes to at least stay
even — ∴ salary ↑? internal

program enhance — internal

10% cut → ~~sal~~ resources.

Not across the bd —

Oct 13-14 meeting

Engry alloc — new \$ yes / overhead \$ yes

existing \$ — no — cut / now

AWARDS

Fall Faculty Meeting
26 September 1986

Outstanding Teacher Award (plaque and \$500)

Thomas G. Stockham, Jr. (Electrical Engineering)

Outstanding Teaching Assistant Award . . . (plaque and \$250)

Stephen Gilbert (Computer Science)

Outstanding Staff Award . . (plaque and \$350)

Vickie S. Jones (Chemical Engineering)

Patent Prize Award . . . (plaque and \$500)

Barry Hanover

Patent # 4,557,724 "Apparatus and Methods for Minimizing Cellular Adhesion on Peritoneal Injection Catheters", issued Dec. 10, 1985 with D. Gregonis, R. Stephen, J. Harrow, S. Hunter & D. Coleman.

Committee

Assoc. Dean for Research
Director of Office of Technology Transfer (Norm Brown)
Don Sablstrom
& members of Industrial Advisory Board

(previous winners sometimes
but not this year as they
had patents being considered.)

Welcome!

So what's the good news?!

Teaching loads ↓ - quality ↑
ABET

buildings & facilities

Overhead return

Computers

productivity/research support

industrial relations

CLINIC

development

student activities

MEP

Excellence in Engineering

Centers of Excellence

J. Brophy

21 October 1986

J. D. Andrade

Our Breakfast of October 17th and Centers

Confirming our discussion at the recent breakfast meeting of the steering committee of the Center for Biopolymers at Interfaces, I would like to offer the following statement for your consideration:

Interdisciplinary Centers permit faculty in different departments and colleges to cooperate and collaborate on complex, multi-, and inter-disciplinary research activities. Such centers provide unique research and educational opportunities for students, faculty, and staff and are important in developing the science and technology base so important to the University's future and to the economic development of the State and region. It is important that a mechanism be instituted to encourage the development, existence, and success of such endeavors without in any way conflicting or negatively impacting the department or college structure.

Since the majority of the centers derive a significant proportion of their funds from industrial members, it is important that the industrial members know that the activities are indeed supported and encouraged by the University and the State. State support comes from the State Centers of Excellence program and from the State's willingness to allow the University to keep a significant proportion of the indirect costs which it generates.

The University's support should come from two sources:

1. Indirect costs: Centers should be allocated a proportion of the indirect costs generated as a result of center activities without in any way detracting from indirect cost allocations to the colleges, departments, or individual principal investigators.
2. Royalties and other income on technology transfer agreements and licenses: The centers should receive a proportion of the royalty income generated from the licensing of technology developed as a result of center activities, again, without in any way interfering with the distribution of royalty income to the inventor, the department, or the college. One way to accomplish the latter would be to continue to allocate 40% of the University's royalty income to

the principal investigators or inventors and to distribute the remaining 60% between the department, the center, and the University by some appropriate formula, such as 20% University, 20% department, and 20% center. Some royalty should be returned to the center to permit its continued existence and development.

JDA/ag

cc: P. Gerity
K. Caldwell

PAGE EIGHT PERSPECTIVE

Cornerstone of Economic Development

by Dr. Joseph D. Andrade, Dean, College of Engineering

Many studies have identified the dominant role engineering schools play in a state's economic development, with the New England area offering a prime example of a major success story. Research at the Massachusetts Institute of Technology and its associated laboratories has led to the establishment of more than 1,000 companies over a 40-year span. From 1976 to 1984, high technology companies created 125,000 jobs in the Bay State and have helped keep its unemployment rate at one of the lowest levels in the nation.

In California, the engineering school of Stanford University has played a similar role in creating jobs in Silicon Valley. Other states have also recognized the importance of strong engineering programs in bringing about economic development.

Besides providing new funds for improved salaries and facilities, many state legislatures have made major appropriations in recent years for engineering education and research. Some examples are: Arizona, \$12.3 million; Michigan, \$21 million; Texas, \$35 million; and North Carolina, \$96.5 million. Utah's legislature made a good start by authorizing \$2.5 million for Centers for Technological Excellence at its universities and colleges in 1985-86.

These Utah Centers of Excellence provide a unique, innovative way to enhance interactions and technology transfer between university and industry researchers. Faculty experts coordinate their research in areas of direct relevance to industry. Industry fees are matched by state, federal and foundation funds.

Centers now operate at the College of Engineering in the following specialties: artificial hearts and biomedical devices; biomaterials profiling; biopolymers at interfaces; combustion; communications research; controlled chemical delivery; engineering design, including robotics; microelectronics; noninvasive and diagnostic imaging; and sensor technology. College of Engineering faculty collaborate with faculty in the colleges of Pharmacy, Science and Mines, and the School of Medicine. North American, European and Asian corporations participate in the centers and send their scientists and engineers to our campus to participate in the centers' work.

These accomplishments, some of which helped to make the Salt Lake Valley internationally known as "Bionic Valley," have occurred in the face of severe funding shortages. The state appropriation for the College of Engineering is some 25 percent below that of competitive colleges, whether measured on a per-student or per-faculty basis.

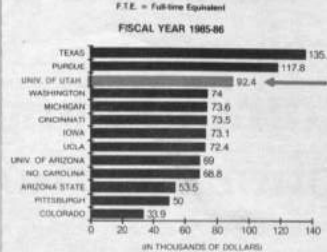
The college's faculty salaries are also some 25 percent below those of peer institutions. Funding for technical staff is the lowest among 13 engineering schools recently visited by a national accreditation examiner. Similar underfunding plagues Marriott Library's acquisition expenditures, which directly affects holdings of engineering and science materials. Such funding for 1985-86 by Marriott was \$75 per student, compared with an average of \$172 per student for peer university libraries. Utah ranks at the bottom in state funding per engineering student and near the bottom in state funding per faculty member.

Significantly, however, the University of Utah ranks third from the top among comparable institutions in the amount of research funding generated by the engineering faculty. Utah's excellent, highly motivated and highly competitive faculty have brought in federal and industrial research grants and contracts that now exceed \$8 million per year.

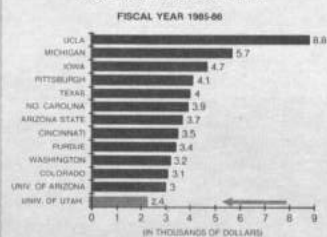
The College of Engineering has contributed to the state's economic development for many years. In addition to helping create spinoff companies, the college graduates more than 400 engineers annually, about 70 percent of whom remain within the state. Some 300 engineers are also graduated each year from the state's two other accredited engineering schools at Brigham Young and Utah State universities. Because the aggregate output is so small, it's not surprising that a number of major companies who are considering locating facilities in the state



OUTSIDE RESEARCH FUNDING GENERATED per F.T.E. FACULTY
F.T.E. = Full-time Equivalent
FISCAL YEAR 1985-86



STUDENT BUDGET per UNDERGRADUATE STUDENT
FISCAL YEAR 1985-86



are concerned over the limited number of available engineering graduates.

The college has already spawned many spinoff companies in areas in which it excels, including computer science, bioengineering, materials science and engineering, microelectronics engineering design, combustion and robotics.

The college could also achieve national leadership in many other areas of importance to Utah's future, including medical devices and diagnostics, sensors, artificial intelligence, computer-aided design and manufacturing, environmental engineering, biotechnology, polymers and ceramics, semiconductor materials, and telecommunications technology.

Based on its existing strong programs, the college could contribute greatly to economic growth by developing a program in microengineering. This field combines modern microelectronics, optics,

the effective transfer of technology from the laboratory to the marketplace.

Of the state's \$1.3 billion allocated for education in 1986-87, \$978 million is earmarked for public schools — grades K-12. Utah's nine colleges and universities share the remaining \$335 million, with \$121.6 million going to the University of Utah. Of that the College of Engineering receives about \$6 million, or less than 2 percent of the higher education appropriation.

College funds educate some 2,600 undergraduate and graduate students and pay the salaries of 92 faculty members and some 25 staff employees. From this pool, academic programs are conducted in bioengineering, chemical engineering, civil engineering, computer science, electrical engineering, mechanical and industrial engineering, and materials science and engineering.

A healthy economy, though, is built

This article was prepared with the assistance of Dr. Peter F. Gerity, assistant dean for community and external relations, and Walter B. Doyle, special adviser to the College of Engineering.

Dr. Andrade was appointed dean of the College of Engineering in 1983. Widely recognized for his research in biomaterials, he has strengthened the college's ties and interactions with industry.

mechanics and machining, and chemical and biochemical engineering to produce very small, even microscopic devices to perform functions now requiring large devices and machines.

Research in the college's laboratories has contributed to the founding of more than 30 companies since 1970, which today employ some 8,000 Utahns and generate sales in excess of \$600 million a year and state and local tax payments of some \$20 million annually. These tax revenues exceed the College of Engineering's state appropriation by about four times — a substantial return on the state's investments. The college is oriented toward the commercial application of the technology it develops. We are fortunate to have a university which provides the entrepreneurial atmosphere necessary for

upon more than a strong College of Engineering. It needs a strong University, a strong overall higher education system, strong public schools and community and public services, and an excellent cultural and humanistic environment, including the symphony, art, dance, theatre and museums. These all require money, which means taxes, bonding, and other funding mechanisms. A strong economy tomorrow needs new investment today, especially in engineering and its allied areas.

Utah's revenue problems are largely the result of a relatively weak industrial base, coupled with large families requiring significant services, such as higher education. The long-range resolution to these revenue problems is an improved tax base, which needs industrial and economic development. That same

economic development will provide jobs for our rapidly expanding population.

Jobs and economic development require investment. During the depths of its economic recession and revenue shortfalls seven years ago, the state of Michigan invested in long range economic development by expanding opportunities and activities in engineering and science. As a result, the Michigan economy is now very healthy; considerable economic growth has resulted; their investment has paid off.

Utah must similarly invest in its future. The longer the state waits, the longer it will take to develop the tax base needed to solve our economic problems. Clearly, increased tax revenues are essential to meet Utah's public and higher education needs. One funding mechanism well suited to long range economic development is bonding. Bonding is an investment in the future. Bonding can be used not only to build facilities, but also to provide permanent endowments to cover operating expenditures in perpetuity.

In developing programs for Utah's economic needs, Engineering's administration works closely with an Industrial Advisory Board composed of 15 leading corporate executives who represent every sector of Utah industry for which the college provides trained engineers. Besides their natural concern for the state's economic health and development, board members bring a broad outlook to the Utah business scene.

In examining the college's funding needs and its role in Utah's future economic development, the advisory board concludes the state must produce more engineers if it expects existing industries to grow and new industries to arrive. Another conclusion is that the college's funding deficiencies must be addressed to recruit and retain outstanding faculty, to meet equipment needs and to provide adequate technical staff for teaching and research. It is important to emphasize that the advisory board's analysis and its proposals and recommendations listed below are not official University policy. Instead they are the conclusions of an independent group of business executives who have studied one unit of a large academic institution and have related its functions to the practical needs of the economy in which their companies operate.

While not unmindful of Utah's current economic problems, the advisory board urges the investment of more state and private funds in the College of Engineering as insurance for Utah's economic development in the decades ahead.

The board specifically proposes that: — The state appropriation to the College of Engineering and allied areas be increased in the range of \$4 million to \$5 million a year. These new funds would be applied to faculty and staff salaries; laboratory equipment; such engineering-related areas as mathematics, chemistry, physics and even writing; library services and materials.

— Plans be made for construction of a new microengineering and biotechnology laboratory building, whose total cost might be in the range of \$12 million to \$15 million. Of that amount approximately two-thirds would go for construction and about one-third for equipment.

— College of Engineering funding be increased 20 percent a year to double the number of bachelor's degree graduates from 300 per year to 600 per year by 1994. This would require increasing the base budget about \$2 million a year for five years. The rise in enrollment would parallel the overall growth in the state, based on current population trends.

— An additional engineering building be constructed to accommodate the increased faculty, students and staff that program expansion would produce. This could cost some \$15 to \$20 million.

The advisory board further notes that Utah possesses an extremely valuable resource in the College of Engineering, a resource which can help move the state into economic prosperity for many generations to come. Strengthening that resource may be difficult, but the board believes it is necessary to assure economic development in the state of Utah.



New program enhances international climate, seeks to fill gaps in knowledge of the world *see story below*

UNIVERSITY OF UTAH

Review

Vol. 20 No. 3 DECEMBER/JANUARY 1986-1987 (USPS 6524-2000)

In faculty and curriculum, U. takes a global outlook

by Mary Dickson, *Review* writer

The understanding of people and events beyond national borders has become increasingly important. Developments in international trade, foreign affairs, military involvement and other ties throughout the world highlight the interdependence of nations and people.

The International Studies program was developed in 1984 to help the University and the community develop "international competency." The program coordinates international education in various departments, promotes interaction among faculty interested in international topics and sponsors campus speakers and conferences on international issues. Since its establishment, it has grown significantly.

"International understanding and competence is as vital in today's world as are math, reading and writing skills," says Dr. Edward L. Kick, professor of sociology and program coordinator. "Americans often don't see how their lives are affected by the world community, and they commonly think the study of other cultures and peoples is an unnecessary luxury. But even in Utah we are part of the world economy with some 30,000 jobs in the state dependent on foreign trade, and with exports to foreign countries totalling \$1.3 billion a year."

Those factors, says Kick, combined with the state's secular and religious ties to other countries make international understanding particularly urgent for Utahns.

Languages professor Stephen W. Durrant, a member of the program's coordinating body, notes, "The real size of the world is the amount of time it takes to travel from one place to another. In these terms, Salt Lake City is now closer to Beijing or Moscow than it was to Vernal or Nephi just 100 years ago. International studies is no longer the examination of distant lands but of intimate neighbors."

While the International Studies program doesn't yet offer a major, students may obtain a baccalaureate degree through the Bachelor of University Studies degree program. In addition, minors are available in a range of subjects.

Faculty are drawn from more than 30 University departments, primarily in the colleges of Social and Behavioral Science and Humanities. According to Kick, faculty expertise represents nearly every major region and language in the world and reflects the international scope of the campus.

(Continued on Page 3)



Residential living director Dan Adams, second from left, shares a light moment with hall directors Marty Shaub (Van Cott), left, and Sandra Hancock (Ballif), center, along with student resident advisers Dana Bender and Alan Fry.

The residence halls

They provide a slice of real life with the help of some sharp people

by Byron Sims, *Review* editor

In the commuterized world that takes in all but about 5 percent of the University student body, resident students are not very visible. Their live-in life at Ballif, Van Cott and Austin halls creates their own little corner of the world. It is home away from home. And it is the essence of the college experience.

First, get the terminology straight. These students live in *residence halls*, not dormitories. And there's a difference. "We think residence halls are places for living and learning," explains Marty Shaub, director of Van Cott Hall. "Dormitories are simply a place to sleep."

Secondly, emphasize the learning aspect, since college life for the resident student doesn't end at the classroom door. The goal, purpose and professional aspiration of the Residential Living staff, that is, the director, three hall directors and a coterie of resident advisers or RAs, is that student life "inside" becomes a preparation for the "real world." Conse-

quently, the staff's lives become one of 24-hour responsibility, fraught with challenge, but holding the promise of deeply personal rewards.

"Residential living rounds you out as a person and helps shape your personal values," asserts Dan Adams, an 11-year veteran as director of Residential Living. He supervises the University's three halls and their respective directors.

"Residence halls are places for living and learning. Dormitories are simply a place to sleep."

Adams has been pleased by the steady growth in occupancy over the past three years, from 78.5 to 90.5 percent. Since the halls have to be self-sustaining, the occupancy factor becomes as critical as ratings to a TV network.

He credits the rise to a combination of factors. "Two years ago, we decided we needed a change in our recruitment efforts," he relates. "We wanted to center on what would attract students. So we stressed the academic side of on-campus living and pointed out that 45 percent of our students have a grade point average of 3.0 or above." Then the UTE Wing was added (*Review*, April-May 1986), which set aside room for honors students or those with high GPAs. (UTE stands for Undergraduate Tradition of Excellence.) This year the honors floors have been doubled in size and are full.

The recruiting effort has also targeted local students instead of concentrating on out-of-staters or those beyond commuting range. "Where the campus used to be divided 75-25 percent between in-state and out-of-staters, it's now closer to 60-40," observes Adams.

Further inducement came from a change in the food program. Heretofore, residential students had to eat in the

(Continued on Page 2)

WHY INVENTORS LIKE UTAH

By

Dr. Joseph D. Andrade
Dean, College of Engineering
University of Utah

In 1969, I approached Utah with some misgivings. I thought of Salt Lake City as a place located in a desert, isolated from the rest of the country. Now here I was, driving in from Denver, expecting a fresh Ph.D. degree very soon. The approach to Salt Lake City via Interstate 80 from Denver is breathtaking: spectacular mountains followed by the lights of the Salt Lake Valley - punctuated and enhanced by the sunset over the Great Salt Lake. There was no desert in sight, only a verdant valley, a vast lake and snow-capped mountains. I soon met the famous Dr. Willem Kolff, father of the artificial kidney and the artificial heart. He was to interview me for an assistant professor's job at the University of Utah.

Kolff had booked my accommodations in Brighton, an alpine ski resort at 8,700 feet in Big Cottonwood Canyon, just 30 minutes from the University. My wife, Barbara, and 2 month old son were enthralled by the beauty of the Wasatch Mountains and the cleanliness and warmth of the city -- and a University located in one of the most spectacular natural settings imaginable. Fortunately Kolff, and the College of Engineering, offered me the job. I jumped at it!

We had intended to stay in Utah two or three years -- just enough to get started in the new-fangled field of bioengineering research. Then I hoped to move on to one of the more "prestigious" schools. That was 18 years ago. We are still in Utah. I admit it: that 30-minute drive up to Brighton made me a fan of Utah's natural beauty. And, the talented, inspiring, and demanding Dr. Kolff gave me the freedom to undertake the kind of creative research that, to the inquisitive engineer, is far more satisfying than a high salary.

Not that monetary gains are not available in Utah. On the contrary: the state encourages faculty to transfer their new technologies into commercial products for the benefit of all. Research at Utah's engineering schools (at the University of Utah in Salt Lake, Brigham Young University in Provo, and Utah State University in Logan) has helped create dozens of new companies over the past 20 years. Many produce the artificial organs and medical devices that have made the area known as "Bionic Valley." The list includes the artificial heart and kidney; the "Bionic Arm", the Utah-MIT dextrous hand; physiological monitors; robotics; artificial hearing; drug delivery through the skin; and artificial fallopian tubes, urethra and bladder. These advances have most frequently been the result of joint research by engineering, medical and pharmaceutical faculties. Such interdisciplinary work has also spawned new technologies in electronics, biomedical science, computer science, space technology and natural resources use and control. There is an inter-and multi-disciplinary tradition at Utah.

Individual faculty members at Utah's universities have founded most of our spin-off companies. Some of our inventors have been lured away to set up shop in other states, but most choose to remain. Since I became an engineering dean in 1983, I have tried to learn why inventive minds like to work in Utah. The chief reasons seem to be:

- Pioneering Spirit in Technology: The universities give researchers freedom to investigate the frontiers of science and technology in an atmosphere with minimal red tape and bureaucracy. Pioneers are respected here. One result: government and private research grants per Utah faculty member rank near the top among peer institutions nationally. Another: in the number of spin-off companies created by its research, the University of Utah is outranked only by Massachusetts Institute of Technology and California Institute of Technology.
- Culture and Life Style: The majority of Utah's 1.6 million inhabitants are Mormons, whose religious rules emphasize clean family life and high moral ideals. Their abstinence from using alcoholic beverages and tobacco impresses most visitors. Adherents of other denominations enjoy the stability of Utah society and find that Mormons make good neighbors. There is a universal respect for education in Utah that is also reassuring to families moving into the state with school-age children. There is little crime, and slums are practically non-existent.
- Climate and Terrain: I enjoy working on a campus located some 4,500 feet above sea level. The air is clean, the skies are clear and the Golden West sunsets that we see across the Great Salt Lake in summer are breathtaking. Skiing on the "Greatest Snow on Earth" is no more than 30 to 40 minutes' drive from downtown Salt Lake, and the resorts usually operate from October to May. I also like hiking -- and Utah has vast parks and canyonlands, and superb fishing, hunting and camping. You are rarely more than an hour's drive away from scenic areas at altitudes of 9 - 10,000 feet.
- Arts and Entertainment: New faculty families tell me how much they enjoy the easy access to the Utah Symphony Orchestra concerts, the performances of Ballet West, the Utah opera, plays and musicals, and excellent local theater groups. It is no accident that Utah produced Maude Adams, Loretta Young and Wilfred Brimley. Performing arts abound here. As one newcomer told me: "Best of all, in Utah we can afford the theatre, which we couldn't in New York."

For all of the above reasons, I plan to stay in Utah. By the way, my wife and children agree!

THE
UNIVERSITY
OF UTAH

COLLEGE OF ENGINEERING
OFFICE OF THE DEAN
2000 MERRILL ENGINEERING BUILDING
SALT LAKE CITY, UTAH 84112
TELEPHONE 801-581-5911

13 May 1987

Vice President I. Altman
Provost J. Clayton
President C. Peterson
Park Building
Campus

Dear Irv, Jim and Chase:

I have been reflecting on our discussions and interactions of the past several months. It is clear to me that I can more effectively serve the College, the University and the State as an individual member of the University faculty and as a private citizen rather than as a member of the University administration.

I have come to the following conclusions:

- 1) I have been impatient and ineffective in presenting to the Administration the importance of Engineering in the University and in the State.
- 2) The Administration, for reasons of which I am as yet unaware, has decided that Engineering is not a major priority, and
- 3) The Administration has not yet come to grips with the problem of long-range planning, focus and priorities.

There are three parts of our very recent budget deliberations that have caused me particular concern:

- a) The budget allocation for 87-88 was far worse than my most pessimistic scenario.
- b) No commitments or projections were given for 1988-89 and 1989-90 -- in spite of the urgings of several Deans that such good-faith commitments were philosophically and psychologically important in weathering the current crises.
- c) There is no commitment, no enthusiasm, and no evident support or encouragement for an Engineering thrust or initiative for the 1988-89 budget process.

I have strongly considered holding on and pushing for a State Engineering initiative. However, I don't think the engineering/industrial community here is large enough or strong enough to push such a program without the Administration's strong support. I am convinced 1) that an Engineering initiative has a greater probability of success than anything else the University could submit to the Regents and Legislature, and 2) that an Engineering initiative would benefit the entire University. I think the University community would endorse such an action if it were properly presented to them.

I respectfully resign as Dean of the College of Engineering, effective October 1, 1987. This time frame should permit the College to operate through the summer and into the fall quarter with minimal loss of continuity. I will return to my duties as Professor of Bioengineering, Materials Science and Engineering and Pharmaceuticals. I wish to activate, effective October 1, 1987, the sabbatical leave which was awarded for the 83-84 year and which has been postponed until the conclusion of my service as Dean.

I appreciate your individual friendship, the frank and open discussions we have had, and your commitment and dedication to this University. We simply disagree as to priorities, time frames and directions.

Good luck.

Regrettfully,

J. D. Andrade, Ph.D.
Dean

cc. J. Brophy
Department Chairmen, College of Engineering
Associate Deans, College of Engineering

THE
UNIVERSITY
OF UTAH

18 May 1987

Governor Norman H. Bangertter
210 State Capitol Building
Salt Lake City, Utah 84114

Dear Governor Bangertter:

Your actions, initiatives, and courage as Governor have impressed me very much. I am particularly appreciative of your actions in behalf of education and economic development. The State clearly has many problems, and your actions are setting the foundation and stage for the solution to those problems, although we all realize some of those solutions may take years to develop.

An area in the State in which I have particular interest is the coupling between the educational system and the economical and industrial community. I have been disappointed that the Board of Regents has not shown stronger interest and initiative in supporting and enhancing your administration's economic development initiatives. Therefore, I feel there should be some member of the Board of Regents who has some interest, experience, and perspective regarding the coupling of higher education to economic development and who can approach that challenge objectively without particular regional or political constraints.

I have resigned my position as Dean of the College of Engineering, effective October 1, 1987, in part, because I felt that the University administration has not been as enthusiastic nor as responsive as I had expected regarding your own economic development initiatives and the University's response to those initiatives. I understand that the state statutes and the Board of Regent's bylaws do not prevent a member of a university faculty from serving as a regent. I would like to volunteer to serve in this capacity and ask your consideration during one of the next appointment cycles. My record as dean over the last four years will indicate that I take a state-wide perspective with respect to the system of higher education and related issues.

I have had the opportunity to interact with several members of your administration, and they could perhaps provide some input regarding the suitability of such an appointment, particularly Lt. Governor Val Oveson; David J. Grant, Jr., Deputy Director and David Adams, Executive Director of Community & Economic Development; and Lynn Blake, Director of the Centers of Excellence program.

COPY

COLLEGE OF ENGINEERING
OFFICE OF THE DEAN
2000 MERRILL ENGINEERING BUILDING
SALT LAKE CITY, UTAH 84112
TELEPHONE 521-581-6911

Although I have resigned as dean, effective October 1, I certainly intend to maintain my appointment as Professor in the College of Engineering and to continue my research and teaching activities.

Thanks again.

Sincerely,

J. D. Andrade, Ph.D.
Dean

JDA/ag

cc: Pres. C. Peterson

encl: Vita

MAY 20 1987

DEAN'S OFFICE
UNIVERSITY OF UTAH
COLLEGE OF ENGINEERING

MEMORANDUM

TO: President C. Peterson DATE: 18 May 1987

FROM: J. D. Andrade

SUBJECT: Future

You recently indicated that you have encouraged the Governor to appoint regents who can provide some initiative, leadership, and actions to help improve the State's higher education system. I have informed Governor Bangert that I am interested in being considered for an appointment to the Board of Regents. A copy of my letter to him is enclosed.

The experience and perspective that I have obtained during my four years as dean and 18 plus years at this institution, together with the opportunity to work with every institution of higher education in the State as part of the Pre-engineering Liaison Committee, and with various components of state government as part of the economic development thrust of the Bangert administration, have helped provide an insight and background which should be useful in the Board of Regents. I have visited many universities over the past four years, 17 in particular, and have at least some appreciation and perspective of what other states and regions are doing with respect to higher education and its role in state and local communities. I hope you will talk to the Governor and support this consideration.

Although we have had our differences, I know that we are both objective individuals and have as our key objectives the best interests of the institution and the State.

JDA/ag

encl

RECEIVED
University of Utah
JUN 1 1987
Dean's Office
College of Engineering

Joe
Joe
I appreciate this offer of service. I will support it with the Gov. The politics of institutional rivalry may limit what the Gov will do with the appt. of a faculty perm. But you could be a real help to the U of U, all institutions, & the State
Thank you
Chax



May 18, 1987

Dean Joseph Andrade
College of Engineering
2000 Merrill Engineering Building
Campus

Dear Joe:

I understand and respect your decision to resign as Dean of the College of Engineering. Although I disagree with some of your interpretations about the administration's stances in respect to your college, the time is now past for us to continue discussing our respective views.

I concur that our relationship has been friendly and frank, and I hope that we can continue to maintain our affiliation in one form or another in the future. Although our mutual education of one another has probably not been wholly successful, I have learned a great deal from you. I hope that you too have benefited in some small way from being Dean and working with some of us in the University administration.

Good luck; I know that you will be a successful and productive faculty member.

Sincerely yours,

[Signature]
Irwin Altman
Vice President for
Academic Affairs

RECEIVED
University of Utah
MAY 20 1987
Dean's Office
College of Engineering

Vice President for Academic Affairs
205 Park Building
Salt Lake City, Utah 84112
(801) 581-6314

Chase N. Peterson
President



May 26, 1987

Dean Joe Andrade
University of Utah
College of Engineering
2000 MEB

Dear Joe:

I've received your letter of resignation as Dean of the College of Engineering and accept it with reluctance. You've provided us with energy and vision and I'm pleased to contemplate continuation of those qualities and your professional expertise in the faculty. You and I, Provost Clayton, and the Academic Vice President will have much to talk over in the next months with respect to the future of the College and the characteristics of the new Dean.

Thank you for all you've done. We both wish there was the capacity for you to have reached more of what you and I hope for. That doesn't mean we won't all continue to try. With great appreciation.

Sincerely,

Handwritten signature of Chase N. Peterson.

Chase N. Peterson
President

RECEIVED
University of Utah

JUN 1 1987

Dean's Office
College of Engineering

Office of the President
203 Park Building
Salt Lake City, Utah 84112
(801) 581-5701

Chase N. Peterson
President



June 9, 1987

Dean Joseph D. Andrade
College of Engineering
2000 Merrill Engineering Building
Campus

Dear Dean Andrade:

Your resignation as Dean of the College of Engineering, effective October 1, 1987, was formally reported to the Institutional Council on June 8th. The members of the Council join me in expressing appreciation for the energetic leadership you have provided in the College of Engineering during the past four years.

You have always been a vigorous and effective member of the University community, and your example of superior teaching and productive research merits emulation by your colleagues all across the campus.

While I will miss your participation in the administration of the University, I am gratified that you are planning to resume your faculty role on a full-time basis, following the year's sabbatical leave which was deferred when you accepted the appointment as Dean.

Sincerely yours,

Handwritten signature of Chase N. Peterson.

Chase N. Peterson
President

RECEIVED
University of Utah

JUN 16 1987

Dean's Office
College of Engineering

Office of the President
203 Park Building
Salt Lake City, Utah 84112
(801) 581-5701

DESERET NEWS, SUNDAY, JUNE 7, 1987 B 11

Fund schools amply or weaken the future, resigning U. dean says

By Carrie Moore
Deseret News staff writer

If Utah is to stake its future successfully on technology-based economic development, either taxpayers will have to do better at funding higher education or overlapping university programs may have to be consolidated.

That's the assessment of Joseph Andrade, dean of the University of Utah College of Engineering, who says the U.'s continuing budget problems and lack of commitment to the engineering program prompted him to resign his post.

His resignation as dean will become effective Oct. 1, although he will remain at the U. as a full-time professor and researcher after a year's research sabbatical.

Andrade said funding for the College of Engineering was cut 8.3 percent last year, while the average for other campus programs was 6.3 percent.

"We took the cut willingly on the assumption and expectation that those monies would be available for building programs in areas that were not eliminated or cut. Some of that did materialize. We did get an increase in computer science.

"But the areas cut the hardest had expected money to come back into them, yet they didn't receive anything back to strengthen their programs. They are very demoralized and feel they've been used in the process."

Administration officials say they have given engineering all the money they can without sacrificing other programs. Andrade said if he were to allocate the U.'s budget money, he doesn't know what programs he would cut to better fund his own.

"I don't have the university-wide information and perspective they do. But one of the concerns I have is that,

even though the administration has been very courageous in reallocating budget funds internally, our problems are so serious that we need to strongly consider the question: 'Can we continue to do everything we're doing?'"

He said that's the question the state Board of Regents should be addressing in assessing duplicate university programs.

Andrade also suggested some consolidation within programs at the U. Though he declined to be specific, he said, "A number of campus components have been studied for consolidation. There are outside review groups that are surprised we haven't done that already."

He said both local companies and those deciding whether to locate in Utah are already concerned about the relatively small number of engineering graduates — about 600 annually from the state's three major universities. "If we're serious about economic development, we should be increasing enrollment in those programs rather than cutting them."

Even with a continued bleak funding outlook, Andrade said he chose to stay at the U. despite offers from other universities because, "I've been here 18 years, and I like (Utah) very much. That's one of the reasons the system runs is because people prefer to stay here, even when salary differentials become very extensive."

He said it is safe to say he and his colleagues are paid 20 to 25 percent less than their counterparts at peer institutions.

But his decision to stay doesn't mean others in the technical disciplines will.

"It's the technical areas that are the most pressured — the most in demand and the most mobile. Yet those are the very areas we need to maintain and strengthen."

Engineering dean quits, claiming lack of support from U. administration

By DENNIS ROMBOY
Chronicle investigative editor

Citing disagreements with the University of Utah administration as to the future role of the College of Engineering on campus, Dean Joseph Andrade announced his resignation last May. It will be effective Oct. 1, 1987.

Andrade will remain at the U. in teaching and research capacities. Upon resigning, however, he said he would like to activate a sabbatical leave that was awarded him in 1983, but was postponed until the end of his service as dean.

Andrade, who has served as dean since 1983, said he has grown "impatient and ineffective" in his attempt to convince the U. administration that engineering is important to the university and to Utah. "I'm not as effective as I'd like to be. That tells me it's time to let someone else try."

He said he has discussed the role of engineering at length with U. administrators, but the facts and information he has presented have not been effective. "I'm out of material to convince them to do something.

"The administration does not fully appreciate the important relationship between engineering and the community."

U. Provost James Clayton disputes that, saying the administration demonstrates the importance for engineering in a variety of ways.

The completion of the new phase of the Merrill Engineering Building shows commitment to expansion, Clayton said. The new building filled classroom and space needs of the college.

In terms of money, he said the College of Engineering receives more base funding than other colleges on campus.

In addition, Clayton said the administration returns more research overhead to the engineering school than the school generates on its own.

Engineering receives "adequate support if not generous support" from the administration, he said.

Andrade said the future of the U. depends on the future of the state's economy. Engineering figures heavily into that future because it creates a high rate of return to the economy when its graduates hit the labor force, he said.

"If you cripple the engineering school the U. will not help the economy," he said. There are two solutions to the economic problems facing the state, Andrade says.

The first would be to help the economy through engineering, he said.

If the economic conditions are not improved, he said, the U. will have to be restructured and redirected to operate within smaller budgets. This would include tightening up programs and dividing responsibilities.

However, Andrade said he doesn't see that happening.

Clayton said the U. can't adequately fund any of the colleges on campus and engineering is no exception. The administration must consider the needs of the university as a whole.

The U. needs to take a very hard look at where it wants to be in five or 10 years, Andrade said.

He said the administration has not come to grips with long-range planning, focus and priorities for problems facing the engineering school.

Clayton said the U. has a vision of where it wants to be in the future and long-range planning is done all the time.

However, given the current level of state funding and resources, he said other colleges can't be starved in order to feed another.

Budget allocations for the engineering school have been of particular concern, Andrade said.

The budget for the 1987-88 school year is far worse than he ever imagined, he said. In addition, the administration gave no commitments or projections for the two years after that.

There is no enthusiasm and no evident support or encouragement for an engineering thrust or initiative for engineering for the 1988-89 budget process, he said.



Agenda

~~Awards~~
~~Chair~~

Awards

Chair

My Pitch

Intro

Parshing

Free Lunch

'Last' Fac Meet

9/25/07

Welcome

Fall Fac Meet - beginning of new Acad Year

Pleasant productive summer - recharged, recharged - and eager to meet students on Monday - in brand new physical surroundings

~~Let's begin~~

Let's begin with introductions and recognition

Recognition ^{of achievements} by DEPT. - alpha

Bio E - Christ/China → Norman

Chem E - Tyler

Civil - a hook from China

Computn Science - Robert Johnson ^{dot and cover} ^{involved in board}

EE - ^{thank R. Rosenfeld} - anyone!

MSE - ^{Stockton} ^{de Bow}

M d IE - Hoopana

One of the most rewarding aspects of the Dean's job is not only working closely with and understanding of productive faculty ^{& staff} but also in recognizing their many & varied accomplishments

The fall faculty meeting traditionally is when the college gives its various awards

College ^{Best} Teach Award - college known for outstanding UG & grad teaching - Rosenfeld Richard Farnot

Outst ^{TA} Award - ^{Eric Moxley} ^{C.S.} ^{de Smith} ^{KE SMITH}

Outst staff award ^{this year} ^{tech staff} → ^{de Vries} ^{Richard Farnot}

44500 Patent Prize ? ^{de Vries} ^{Richard Farnot}

Reports

Gehrmlich
Przyner
Gentry
De Vries

Committee has put ~~out~~ ~1.5M in remodeling in
MEB + 1-2M in the Bldg of ~1/2-1M in
offices of Minn Space - scientific space committee!
Still a problem - space will always be a problem
It's also space issues to be a problem that will
all need to worry.

3. Salaries This year 2.9% but ~15 of you
received soft money raises - you pay
yourself - controversial? Yes - probably - year
but a lot of Univ admin flexibility & genuine
interest in helping us solve the problem -
It's this flexibility that is the reason ~~we~~
many of you are here. We have our bureaucracy
at all levels - things take longer to get
done - we should have been in this bldg a
year ago, for us - but they do get
done. The Admin still has the
philosophy of Help if you can - and if
you can't - at least stay out of the
way. Many of us are here because of that
freedom & flexibility - which is relatively
rare in acad. inst.ing.

4. Ext. Comm The most important ~~the~~ develop in past
year however is comm ext -
Industry /legislators -
Furston /Gandy - And Ade Bd
Requests /legislators -
The Presidents stand in econ dev. - the
The Center of Eval Program.
The state - at least Gov /Legist / even requests -
understands the impact of Energy to the state.
Their problem is # - ~~and we~~

~~My~~
Effective midnite Wed - I will have had the
pleasure of serving for a little over 4 years
as Dean of the College. It has been a
challenging, exciting, rewarding experience.
The most rewarding aspect has been getting to
know most of you - and of course others
in the Univ - the Comm - industry /legislators.
It has also been rewarding in that I think we
have made some real progress - in a ~~time of~~
difficult times.

4 years ago we held this meeting in
RM 3170 MEB - there was a zero salary &
even worse - a system wide salary freeze -
space was a major problem - your teaching
schedule ~~at~~ was worse than frustrating -
6-7 classes - little or no TA assistance -
students would be in long lines outside your
classroom - literally keeping for a place in class
We had 3400 students and about 85 FTE faculty -
~~was~~ one of the worst ratios among major
schools in the nation. It was grim.

1. Enrollment The new admin - Pres /VP was very cooperative -
we found ways beyond the salary freeze for a
few - we started a severe enroll control
program - which has dropped the enroll, ↓ the
teach load, eliminated the long lines - we have a
long way to go there - but the slope is in the
right direction for the resources available.
You under work
VA program Δ, streamlining of curriculum -

2. Space - thanks to the vision & efforts of L. Latham -
my predecessor as Dean - we now have increased
space & this excellent custom bldg. MEB
space has been remodeled - nearly 50% of the space
in MEB has been reassigned and/or remodeled -
the VA - & space in general is still a major
problem - has improved - Admin - counting current

Value I turn
the meeting over to
a man

So - I want to thank all of you
for your support, cooperation, ^{consideration} criticism, tolerance,
patience these past 4 years - ^{their} Admin Assts
& especially the Chair ^{of their} current &
former - for developing dept's under difficult
circumst.

The DO staff - Assoc Deans

Stephenson
Galmiche
Boyer
deVini

Pete Garity / w Doyle

Of course Marcel / Anne & the office
~~staff~~ staff.

I look forward to returning to my
duties as a teacher & example in my
2 Depts - and to helping in any way
I can.

Dave - welcome to a most
challenging & exciting job -

I am personally ~~is~~ very happy.

It will be my pleasure in a minute to
turn over the meeting - & the D.O. to
Dave Bushing - Prof of Chem Engrg -
holder of the Univ Dist Teach & Res. awards,
Co-PI of the E.R.C. in Adv Comb Tech -
and one of our most dist faculty. We've
interacted closely over the last 4 years & I look
forward to working under his leadership vision
& direction Best

COLLEGE of ENGINEERING

The Budget Situation:

TOTAL CUT: ~ \$512,000 ~ 8.3%

| <u>1987-88</u> | <u>88-89</u> | <u>89-90</u> |
|----------------|--------------|--------------|
| ~ 173,000 | ~ 151,000 | ~ 188,000 |

Reallocation: 1987-88

2.9% Salary Increase: ~ \$132,000

| | |
|------------------|---------|
| COMPUTER SCIENCE | 45,000 |
| COMMITMENTS | 17,000 |
| | 60,000? |

Other 30,000

Total 87-88 Reallocation: ~ 284,000

$$\left(\frac{\text{Increase}}{\text{CUT}} \right)_{87-88} = \underline{\underline{1.66}}$$

$$\left(\frac{\text{Increase} - \text{CS}}{\text{CUT}} \right)_{87-88} = \underline{\underline{0.94}}$$

∞ ENGINEERING WAS NOT SACRIFICED

CUT → Salaries

1988-89 ?

1989-90 ?

So - Why have I Quit?

1. 87-88 BUDGET:
Although ENGRS not unfairly treated,
Budget allocation is inconsistent with
Pres. Peterson's representations &
implications to the Public, the Legislature,
and to this FACULTY.
2. 88-89 and 89-90 Reallocation Pools:
Administration unwilling to make any
future commitments.
3. Engineering Initiative to Regents & Legislature
Administration unwilling to make
a strong endorsement.

o o

⇒ MY CONCLUSIONS:

1. I have been ineffective with the
Administration ⇒ time for a change.
2. ENGINEERING is not a major PRIORITY
with this Administration —
INCONSISTENT with needs of state
3. Administration either:
a) does NOT understand the issues &
needs, or
b) has no plans or priorities.
4 years is sufficient time

All of the Above?

o o I choose to Resign

effective
October 1.

stay on as regular member of faculty.
Work with new Dean in support of
his/her objectives & plans.
Work hard through October 1 on a
Statewide Utah Engineering Initiative

Good News

The Budget could have been Worse!

New Building — new space — summer remodeling
& moves

Administration has provided considerable flexibility in permitting selective FTE adjustments.

Utah Engineering Initiative —
Pre-engrg Coordination Committee
Legislature Interim Committee

An Improved Economy \Rightarrow $\uparrow\uparrow$ Tax revenues.

New VP / New Dean

Research Volume Up

Centers of Excellence Program / State Support.

Gehrmlich / Bryner / Gerity have agreed to stay on thru the 87-88 year.

\rightarrow Irv / Jim (Pres. out of town)

DEAN ANDRADE'S ROAST - September 30, 1987

Short Introduction [Michael Kay]

... "I think it is only appropriate that I turn the time over to Pete and allow him to share with the group some really good news!"

Pete's piece ... "and speaking of offers, Walter has been receiving some rather incredible telegrams during the past several weeks."

Walter welves and wecalls the wemarkable weception of Dean Andrade around the world.

... "Perhaps we might call on one of the best-dressed faculty in our college to provide some tips on how to dress for success."

Deter's "Tips for Dressing for Success."

Cliff "interrupts" Deter and delivers his option for facilitating a better-dressed Andrade. Cliff closes with an interesting observation by a CE surveying class on the recent structural changes in Merrill Engineering Building.

Presentation of premiums / enticements / gifts [Michael Kay]

Dean's Remarks / Revenge !

WHY INVENTORS LIKE THE UNIVERSITY OF UTAH
(GHOST WRITTEN) FOR JOE ANDRADE
UPON HIS RETIREMENT AS DEAN

In 1969, I approached Utah with some misgivings. In 1987, I approached Utah with great trepidation. I thought of Salt Lake City originally as a desert located in a place isolated from the rest of the country. Now here I was, driving in from Denver expecting a fresh Ph.D. degree very soon. Little did I know what awaited me. The approach to Salt Lake City via interstate 80 from Denver is breathtaking (from nearly 10,000 ft.) - spectacular mountains, followed by the lights of the Salt Lake Valley punctuated and enhanced by the sunset over the formerly Great Salt Lake which is growing by the minute, and I can now hear the sounds of the pumps as I sleep. There was little to no desert really in sight then, and even less of it is visible now that the lake has opted to return to its previous Lake Bonneville level.

Shortly after arrival, I met the infamous, Dr. Wilem Kolff, "God Father" of the artificial kidney and wearer of the first artificial heart. Kolff was to interview me for an "Assistant Indentured Servitude" position at the University of Utah. Kolff had booked my free accommodations in Brighton, an alpine Ski Resort at 8700ft. up Big Cottonwood Canyon, just 30 minutes from the University of Utah. My wife, Barbara, and two month old son were enthralled by the beauty of the Wasatch Mountains and the cleanliness and warmth of the city -- and a University located in one of the most spectacular natural settings imaginable...an old Army post and chemical biological warfare development site...an ideal location for biomedical testing. Unfortunately Kolff, and the College of Engineering, offered me the job. I threw myself at it!

Barbara and I had intended to stay in Utah only two or three years -- just enough to get started in the new-fangled field of bioengineering research. Then I hoped to move on

to one of the more "prestigious" schools. That was 18 years ago but some hopes and aspirations die hard. Here we are still stuck in Utah. I admit it: that 30-minute drive up to Brighton made me a fan of Utah's natural beauty for life. The talented, nearly inspiring, demanding, and intimidating Dr. Kolff gave me the partial freedom to undertake the kind of creative research that to the inquisitive engineer is far more satisfying than a high salary. Sadly, that state of affairs is still accurate.

Not that monetary gains are unavailable in Utah - they are just awfully darn hard to come by. The state encourages faculty to transfer their new technologies into commercial products for the benefit of all the old influential families living in the Salt Lake Valley.

Research at Utah's engineering schools at the University of Utah in Salt Lake, the other place down in Provo, and what's its name up in Logan has helped create dozens of new companies over the past twenty years. Once faculty became fairly disgruntled, those spin-off companies flourished. Many produced the artificial organs and medical devices that have made the area known as "bionic valley" and even more recently famous for the "Thiokol syndrome" - more noted for fabrication of rocket boosters and "O" ring seals and other lies. The list of medical devices includes: the artificial heart, exported successfully to Kentucky, complete with faculty; the kidney, successfully exported to Japan; the "Bionic Arm", still held in Utah; the Utah MIT dextrous hand, adopted largely by MIT; physiological monitors, for which we are still trying to collect royalties; robotics; artificial hearing for administrators; drug delivery through the skin at Point of the Mountain; artificial fallopian tubes; urethra and bladder; (for the sake of propriety, several anatomical, prosthetic devices developed in Utah have been omitted from this list.) These advances have most frequently been the result of joint research, joint venture, stark terror, pandemonium and panic to succeed among the competing faculty members for an increasingly smaller portion of the pie. This is referred to as inter-disciplinary work which has spawned not only more than its share of children but new technologies in Electronics, Biomedical Science, Computer Science, Space technology, and Natural Resources. There is a long standing tradition

of inter and multidisciplinary cohabitation in Utah. Individual and group faculty at Utah's Universities have founded most of our spin-off companies. Some of our inventors have been lured away to set up shop in other states but most choose to remain behind because they can't find a decent job elsewhere.

Since I became an engineering dean in 1983, I have tried to learn why inventive minds like to work in Utah - I'm still baffled!

But; for all of the above reasons, I plan to stay in Utah until a better offer comes along!

AND - - - -

Thanks for making the College of Engineering the best place on campus to work!
John

To a good boss, thank.

Al Kolff

This college is such a nice place to work in. You have alot of good people here. You are doing a great job.
Leggy

I have greatly enjoyed working here in the Dean's office. Seeing the hard work and dedication you have for this college makes me glad I chose to go here - Thanks
Connie Shaw

We know you don't like a lot of pomp & circumstance but still wanted to let you know that we think you are a terrific boss.

Gene

It's nice to have a boss who once a year to give us the opportunity to say thanks for being a great boss. You're doing a good job.

Pauli

YOUR ENERGY IS OUTSTANDING - THERE'S NEVER A DULL MOMENT AROUND HERE AND THE COMEDIAN IN THIS OFFICE MAKES IT A PLEASURE TO GIVE ONE'S BEST. NO \$ IN THE CAMP BUT A GREAT DEAL OF APPRECIATION AND RESPECT. RE: (M) (M)

(Bruce)

*They didn't leave me
any space inside so
I'll bring up the rear.
I agree with everything
they've said. It's never
dull & you're great -
no one could question
the "good job" part.
Hang in there - & we'll
try & hang with you.
Nanuel*



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WN 703C

New engineering dean appointed

A University of Utah professor of chemical engineering and acting dean of the Graduate School has been named dean of the U. College of Engineering.

David W. Pershing will succeed Joseph D. Andrade, who resigned to return to full-time teaching and research. Pershing's appointment is effective Oct. 1.

Pershing, a member of the U. faculty since 1976, is a graduate of Purdue University. He earned a doctorate in chemical engineering at the University of Arizona.

Since joining the faculty, Pershing has brought more than \$2 million in external research funds to the university and the state. His research interests include the incineration of hazardous solid waste, cleanup of contaminated soil and transdermal drug transport.

Pershing is also associate director of the state-of-the-art Advanced Combustion Engineering Research Center, a collaborative effort between the U. and Brigham Young University.

The center was one of four selected from 110 applications received by the National Science Foundation in 1985 to improve the competitiveness of U.S. industry in the world market and expand the interaction between industry and universities.

In a meeting with faculty members, Pershing said he will not make any major changes to the programs that were started by Andrade.

—Todd Curtis

animals

from page one
... pounds the option of giving the animals on

OPEN HOUSE



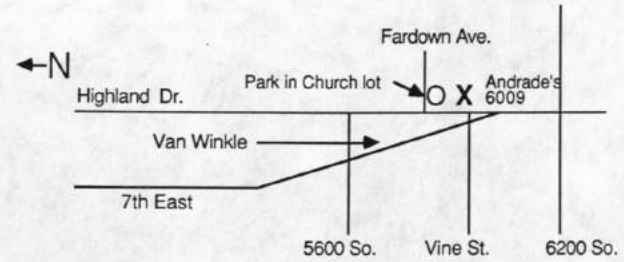
YOU AND YOUR PARTNER
ARE INVITED TO A
VERY INFORMAL OPEN HOUSE

in celebration of and thanks to all of you who have helped make the last four years so challenging, rewarding, exciting, supportive, and even productive.

Wednesday
7-10 pm
Sept. 30
light snacks & drinks
NO NECKTIES ALLOWED!

ANDRADE'S

6009 HIGHLAND DR.
277-1259
RSVP MARVEL
6911



President C.N. Peterson
 Provost J. Clayton
 Vice President I.A. Thomas
 Park Bldg
 Campus

~~Deliver to
 Faculty Monday AM~~
 Mabel D. Stott
 meet Thursday
 10:00 AM

Dear Chase, Jim, & Arv.

I have had the opportunity to spend ~~a~~ ^{some time} ~~and~~ ^{and interaction} ~~relaxed~~ ~~weekend~~ reflecting on our discussions ~~of~~ ~~the~~ ~~past~~ ~~several~~ ~~months~~ ~~and~~ ~~over~~ ~~the~~ ~~past~~ ~~3 1/2~~ ~~years~~.
 I have also ~~incorporated~~ ^{incorporated} my ~~own~~ ~~observations~~ ~~during~~ ~~visits~~ ~~to~~ ~~some~~ ~~of~~ ~~the~~ ~~Universities~~ ~~and~~ ~~colleges~~ ~~&~~ ~~schools~~ ~~of~~ ~~Engineering~~ ~~over~~ ~~the~~ ~~past~~ ~~4~~ ~~years~~.

Of particular interest & relevance was ~~my~~ ~~visit~~ ~~to~~ ~~San~~ ~~José~~ ~~State~~ ~~Univ~~ ~~on~~ ~~Friday~~, ~~May~~ ~~8~~ ~~and~~ ~~detailed~~ ~~discussions~~ ~~with~~ ~~Engineering~~ ~~Dean~~ ~~Say~~ ~~Penney~~ ~~and~~ ~~President~~ ~~Gail~~ ~~Fullerton~~. I found a University in many respects similar to the U. ~~similar~~ ~~in~~ ~~area~~ ~~of~~ ~~academic~~ ~~distribution~~ ~~of~~ ~~students~~, ~~similar~~ ~~with~~ ~~respect~~ ~~to~~ ~~eng~~, a somewhat similar urban setting. ~~Some~~ ~~of~~ ~~the~~ ~~major~~ ~~differences~~ ~~are~~ ~~also~~ ~~important~~ - San José is not a research Univ and its ~~entire~~ ~~base~~ ~~is~~ ~~very~~ ~~large~~. I found an ~~unfamiliar~~, ~~relatively~~ ~~unknown~~, ~~and~~ ~~underfunded~~ ~~institution~~. I found a Dean & a President, both appointed about 6 years ago who have taken a nearly impossible & nearly hopeless situation and have developed a thrust, a movement, a vision which ~~has~~ ^{has} dramatically improved faculty morale and

- * UC-Berkeley, UC-Davis, UCLA, UC-Santa Barbara, USC, San Jose State Univ, UTexas-Austin, UMichigan, UWisconsin-Madison, UMinnesota, MIT, UPittsburgh, Carnegie-Mellon, UWashington, Arizona State Univ, Purdue.

A

~~Administrative is flourishing with respect to vision, direction, and academic leadership. An effort that perception is not unique to me.~~

the community's perceptions and support. They have done it under nearly impossible odds. Their secret: ~~the~~ ^{their} cooperation & support. The president has enthusiastically embraced Project 88 - Engineering Excellence - and the entire campus community is benefiting. The campus is vibrant and active, because they see vision, movement, solutions - they know that Project 88 is but a first step in the transformation of their institution. ~~There is no evidence that could happen at Utah, but it just happened at least not yet.~~ ^{There appears to be support and enthusiasm. There is no evidence of any intra-university concern or paranoia.}

Two things are clear to me now. I have 3 major concerns. These are the points and concerns which have caused me the my study & concern delegation. ~~ETC~~ ~~have~~ ~~been~~ ~~focused~~;

1. I have been ~~ineffective~~ ^{ineffective} in presenting ~~the~~ ^{the} ~~importance~~ ~~of~~ ~~engineering~~ ~~in~~ ~~the~~ ~~University~~ ~~of~~ ~~the~~ ~~State~~; ^{the administration}
2. The Administration, for reasons of which I am as yet unaware, has ~~decided~~ ^{decided} that Engineering is not a ~~major~~ ^{major} priority; and
- 3) The Administration has not yet come to grips with the problem of long-range planning, focus, and priorities.

~~I am~~ ~~not~~ ~~sure~~ ~~that~~ ~~all~~ ~~3~~ ~~of~~ ~~the~~ ~~are~~ ~~true~~ ~~to~~ ~~some~~ ~~degree~~ ~~but~~ ~~my~~ ~~greater~~ ~~concern~~ ~~is~~ ~~that~~ ~~1~~ ~~&~~ ~~2~~ ~~is~~ ~~the~~ ~~history~~ ~~particularly~~ ~~true~~ ~~is~~ ~~that~~ ~~that~~ ~~is~~ ~~the~~ ~~case~~ ~~has~~ ~~caused~~ ~~my~~ ~~particular~~ ~~concern~~.
 Our very recent budget ~~has~~ ^{has} ~~caused~~ ~~my~~ ~~particular~~ ~~concern~~.
 a). The budget allocation for 87-88 was far worse than my ~~most~~ ^{most} pessimistic scenario. ~~Knowing~~ ~~what~~ ~~I~~ ~~expected~~ ~~or~~ ~~at~~ ~~least~~ ~~felt~~ ~~was~~ ~~reasonable~~, ~~I~~ ~~think~~ ~~it~~ ~~should~~ ~~have~~ ~~been~~ ~~at~~ ~~least~~ ~~that~~ ~~good~~.

~~Many several of the initiatives~~
 It is also clear that the college needs more than a half-time dean (half-time being defined as 20-30 hrs/week). ~~At the Schools I've visited which have been most successful (Stanford & Cornell Mellon) have dynamic, aggressive, creative full-time deans who have not attempted to maintain a major research program. With strong Administrative support & backing, it might have been possible. but it clearly hasn't worked. with I have insisted on maintaining a strong research This a dean and this Dean of Eng.~~
~~It is clear that I can ^{with complete confidence} serve the state ^{in a non-administrative capacity} as a professor rather than as an administrator.~~

It is clear to me now that I can more effectively serve the college, the UIC, & the state as an individual member of the UIC faculty and as a private citizen rather than as a member of the UIC admin.

~~I fully intend to ^{work with} ^{the} state ^{to} ^{set} ^{the} ^{policy} ^{and} ^{make} ^{the} ^{decisions} ^{and} ^{commitments} ^{which} ^{the} ^{state} ^{feels} ^{are} ^{necessary} ^{to} ^{grow} ^{science} ^{with} ^{no} ^{loss} ^{of} ^{quality} ^{and} ^{purpose}.~~

SP? ~~commitment.~~
 b. No commitments or projections were given for 1988-89, and 1989-90 - in spite of the urging of ^{several} Deans that they and ~~the~~ that such good faith commitments were philosophically & psychologically important & even ~~of~~ in weathering the current crisis.
 c. ~~No~~ ^{NO} commitments, enthusiasm, ~~or~~ ^{and} ~~no~~ ^{no} evident ~~support~~ ^{support} or encouragement for an ^{Engineering} thrust or initiative in the 88-89 budget process - ~~nor~~ ^{nor} has there been ~~any~~ ^{substantial} ~~support~~ ^{support} for the earlier Excellence in Engng initiative.

~~At the schools I have visited which I have strongly considered holding on and pushing for an ^{Engineering} initiative in spite of any strong support from the Administration, Arizona did not - Texas partially did it. However, I don't think the engineering/industrial community here is, such as large enough and strong enough to ^{push} ^{such} ^a ^{program} without the Administration's ^{strong} support. I am ~~not~~ ^{am} convinced that ~~an~~ ^{an} ^{Engineering} initiative has a greater probability of success than anything else the UIC could submit to the ^{Legislature} ^{and} ^{that} ^{an} ^{initiative} ^{would} ^{benefit} ^{the} ^{state} ^{and} ^{UIC} ^{and} ^{that} ^I ^{think} ^{the} ^{university} ^{community} ^{is} ^{intelligent} ^{enough} ^{and} ^{even} ^{if} ^{it} ^{would} ^{endorse} ^{such} ^{an} ^{action} - if it were properly presented to them. I have offered in the past to ^{make} ^{such} ^a ^{single} ^{presentation} ^{to} ^{the} ^{Council} ^{of} ^{Deans} ^{and} ^{for} ^{the} ^{UIC} ^{and} ^{my} ^{office} ^{was} ^{ignored}. I am quite sure that the Legislature ^{on} ^{the} ^{part} ^{of} ^{it} ^{will} ^{not} ^{support} anything the college has proposed, ^{has} ^{met} ^{with} ^{skepticism}, ^{opposition}, or some variant of paranoia.~~

~~and the Governor would ^{support} ^{an} ^{initiative} ^{and} ^{will} ^{not} ^{support} ^{any} ^{other} ^{major} ^{initiative} ⁱⁿ ^{the} ¹⁹⁸⁸ ^{legislative} ^{session}.~~

This time frame, ~~coupled with the "notice"~~
~~A gave in late February~~, should permit the
College to operate ~~through the summer and into~~
the fall winter with minimal loss of continuity.

I respectfully resign as Dean of the
College of Eng~~ineering~~, effective ~~September~~
October 1, 1987. I will return to my duties as
Professor of Biomechanics & Pharmacology.
I wish to activate ^{effective Oct. 1, 1987 - Oct. 30, 1988} the sabbatical leave which was
awarded for the 83-84 year & ~~for~~ which has
been ^{postponed} delayed until the conclusion of my service as
Dean.

~~It is clear that my effectiveness within this
Admin^{is at its} end - I feel a sense of
personal loss, and intense concern, and even ~~parture~~.~~

I appreciate your individual friendship,
the frank and open discussions we have had,
and your commitment & dedication to this
Univ. ~~However,~~ we simply disagree as to
priorities, time frames, and directions.

Good luck.

Respectfully,

A

cc. J. Bradley.

Chairman, College of Engineering
Associate Deans, " "

~~L. Bradley~~

Need for more chairs

To: All Faculty & Staff
From: J. D. A.
Subject: ~~Chair~~ Changes.

It's Time for a Change

We have weathered a tough 4 years. Thanks to your commitment, dedication, productivity, exuberance, and good nature, we have improved our education & research programs, enhanced our standing & reputation, and generally done well in spite of being ~~underfunded~~ ^{substantially} underfunded.

We ~~have~~ controlled our enrollments; ~~we~~ ^{we} are ~~restricting~~ ^{restricting} & improving ~~four~~ ^{four} of our programs; we have ~~helped~~ ^{helped} established ~~a~~ ^a stable center of excellence program in which many of you are participating; we have weathered a ~~hard~~ ^{hard} budget cut; we have established an ~~ad-~~ ^{ad-} ~~board~~ ^{board} which has been very effective & supportive; we have established ~~college & dept~~ ^{college & dept} publications ~~for~~ ^{for} alumni & friends; we are starting to receive support from ~~new & novel~~ ^{new & novel} sources (Dept of Education, private foundations, ~~individual~~ ^{individual} donors); and ~~our~~ ^{our} ~~space~~ ^{space} situation.

Together we have accomplished a great deal, but there is ~~still~~ ^{much} more to be done.

Furniture, salaries, staff, and equipment support are ~~at~~ ^{at} ~~an~~ ^{an} ~~adequate~~ ^{adequate} level. Space is a continuing, chronic problem. We need to do much more work with ~~alumni~~ ^{alumni}, industry, & private foundations. We ~~can~~ ^{must} ~~make~~ ^{continue} ~~the~~ ^{to} ~~improvement~~ ^{improvement} of our academic programs. We must continue ~~to~~ ^{to} the trend to minimize department "fort" issues and encourage inter-dept & inter-disc activities & programs.

~~It~~ ^{is} ~~an~~ ^{an} ~~urgent~~ ^{urgent} ~~matter~~ ^{matter}. You need ~~a~~ ^a ~~full~~ ^{full} ~~time~~ ^{time} ~~Dean~~ ^{Dean}. Most of you know that I have attempted to carry out my ~~responsibilities~~ ^{responsibilities}.

has significantly improved

we ~~have~~ ^{are} ~~developed~~ ^{developed} a good relationship with the Governor & his staff, the Board of Regents, the Legislature, and other ~~higher~~ ^{higher} education ~~committees~~ ^{committees} of the state.

~~I have~~ ^{humbled} ~~my~~ ^{my} ~~remuneration~~ ^{remuneration} as Dean

(A)

as Dean while maintaining a ~~large~~ ^{active} ~~res-~~ ^{res-} ~~program~~ ^{program} and modest teaching ~~activities~~ ^{activities}. ~~It~~ ^{is} ~~not~~ ^{not} ~~working~~ ^{working}. You need a full-time ~~Dean~~ ^{Dean} with the personality & charisma to "walk the valley" in establishing industrial & governmental support, and who is strong and effective in ~~fund~~ ^{fund} ~~raising~~ ^{raising}.

(B)

Effective October 1, ~~I~~ ^{will} ~~take~~ ^{take} ~~up~~ ^{up} a long-postponed sabbatical leave ~~at~~ ^{at} ~~the~~ ^{the} ~~end~~ ^{end} ~~of~~ ^{of} ~~the~~ ^{the} ~~fall~~ ^{fall} ~~faculty~~ ^{faculty} ~~meeting~~ ^{meeting}. ~~I~~ ^{know} ~~you~~ ^{you} ~~will~~ ^{will} ~~give~~ ^{give} ~~me~~ ^{me} ~~the~~ ^{the} ~~best~~ ^{best} ~~possible~~ ^{possible} ~~support~~ ^{support} ~~and~~ ^{and} ~~encouragement~~ ^{encouragement}. Keep up the good work!

productivity, Thank you for your ~~spirit~~ ^{spirit} & encouragement, and your ~~exuberance~~ ^{exuberance} ~~over~~ ^{over} ~~the~~ ^{the} ~~past~~ ^{past} ~~four~~ ^{four} ~~years~~ ^{years}. I want to express particular thanks to the Dean's office staff and the chairs & their staffs for ~~very~~ ^{very} effective service to the college & uni- ~~versity~~ ^{versity}. ~~It~~ ^{is} ~~an~~ ^{an} ~~urgent~~ ^{urgent} ~~matter~~ ^{matter}.

My "half-time" dean ship would continue to ~~work~~ ^{work} ~~if~~ ^{if} ~~the~~ ^{the} ~~university~~ ^{university} ~~administration~~ ^{administration} was fully committed to & supportive of ~~my~~ ^{my} ~~work~~ ^{work} ~~and~~ ^{and} ~~supporting~~ ^{supporting}. ~~It~~ ^{is} ~~not~~ ^{not} ~~an~~ ^{an} ~~urgent~~ ^{urgent} ~~matter~~ ^{matter} ~~and~~ ^{and} ~~it~~ ^{it} ~~is~~ ^{is} ~~not~~ ^{not} ~~an~~ ^{an} ~~urgent~~ ^{urgent} ~~matter~~ ^{matter}. You need a new full-time Dean, ~~with~~ ^{with} ~~strong~~ ^{strong} ~~arguments~~ ^{arguments}, and ~~of~~ ^{of} ~~more~~ ^{more} ~~support~~ ^{support} ~~to~~ ^{to} ~~renew~~ ^{renew} ~~the~~ ^{the} ~~college~~ ^{college} ~~to~~ ^{to} ~~the~~ ^{the} ~~future~~ ^{future}. I frankly feel that I can be ~~more~~ ^{more} ~~effective~~ ^{effective} ~~in~~ ⁱⁿ ~~helping~~ ^{helping} ~~the~~ ^{the} ~~university~~ ^{university} ~~administration~~ ^{administration} ~~and~~ ^{and} ~~not~~ ^{not} ~~put~~ ^{put} ~~of~~ ^{of} ~~the~~ ^{the} ~~university~~ ^{university} ~~administration~~ ^{administration}.

(A)

~~It is certainly clear that the Deanship is a full time job. In order to accomplish~~ At the College were well-funded and had adequate space & resources, continuing as a half-time Dean might be in order. However, given the college's needs & its ~~necessary~~ goals & objectives, a full-time Dean is needed. ~~Furthermore~~

Also, I think the Univ-Admin- is a bit tired of my arguments and my impatience. A new face - a new voice - and fresh arguments and commitments ~~are~~ can better serve the College

(B)

I look forward to working with you & with my successor in continuing to enhance & develop Engineering at Utah.