Minutes of the Faculty
College of Arts & Science

March 23, 2010

Dean Carolyn Dever called the meeting to order at 4:12 p.m. in Wilson Hall 103.

1. Approval of the Minutes of the Faculty Meeting of February 23, 2010.

There were no comments or questions, and the Minutes were approved.

2. Review of the Minutes of the Faculty Council meeting of March 2, 2010.

There were no comments or questions.

3. Executive Motion Calendar.

A. From the Ad hoc Joint CASP/CEP Committee: Requirements for A&S majors.

Professor Horowitz, Chair of Faculty Council, explained that Council has recommended some significant changes to the requirements for A&S majors. The Council’s recommendations are revised versions of the recommendations in the report of the Ad hoc Joint CASP/CEP Committee. At present, academic majors offered by A&S departments must require between 27 and 36 credits, and majors offered by A&S interdisciplinary programs must require between 36 and 48 credits. Contract majors must require at least 48 credits. Some A&S departments and programs, however, require courses that do not count toward the major or require courses that count toward the major but have course prerequisites that do not count toward the major, and these prerequisites are not always clearly presented in the Vanderbilt Catalog. Faculty Council proposes that majors offered by A&S departments and interdisciplinary programs must require between 27 and 48 credits and that all “hidden prerequisites” be accurately and clearly stated in the Catalog even if they do not count directly toward the major. The recommendations of Faculty Council are:

1. The requirement of a minimum of 27 hours should be retained.
2. The requirement of a maximum of 36 hours should be revised to a maximum of 48 hours.
3. All prerequisites, including hidden prerequisites, should be accurately and clearly stated in the Catalog.
4. Established interdisciplinary majors, as defined by the Vanderbilt Catalog (p. 140 of the 2009-10 Catalog), should be treated the same as majors offered by A&S departments, i.e. they are subject to recommendations 1 - 3 above.

In response to questions, Professor Horowitz stated that “hidden prerequisites” would not count toward the 48-credit limit. The primary debate in Council was between those who
argued that departments should be able to set the requirements for the major as they see fit in order for students to master the material and those who argued that the faculty of the college as a whole should set a boundary on the amount of credits that can be required to fulfill a major and should delineate the proportion of a student’s academic program that is devoted to satisfying those major requirements.

Dean Dever pointed out, in response to a question, that the proposed 48-credit limit allows departments to include the “hidden prerequisites” as part of the major.

Several faculty members opposed the recommendations on the grounds that 48 credits is too high of a limit for departmental majors, because it interferes with the goals of a broad-based liberal arts education. Some argued that 48 credits is significantly greater than one-third of the credits required for graduation and hence upsets the tripartite conception of a liberal arts education (curriculum, major, electives). Moreover, the effective number of required credits is considerably higher than 48 in those departments that have “hidden prerequisites” for the major. Other faculty members were concerned that the increased maximum-limit for majors offered by departments from 36 to 48 would decrease the number of second majors. Second majors constitute a sizeable portion of the number of majors in some programs. A few faculty members were concerned that 27-48 credits was too broad of a range.

In response to these objections and concerns, other faculty members stated that, under the proposed recommendations, students would still have to fulfill the AXLE curriculum, which requires a broad set of courses. AXLE requires students to take thirteen courses from at least seven subject areas. Moreover, the proposed recommendations are well within the parameters of the major requirements of peer institutions. Several faculty members argued that the present 36-credit maximum for departmental majors is too low and that the present interdisciplinary major is the model of the future for many programs. Many pointed out that departments do have a vested interest to keep their major requirements reasonable, or else students will not take or complete their major(s). Consequently, it is unlikely that departments and programs would quickly and universally increase the requirements for their major to the maximum allowed if these recommendations were to be approved. Further, any changes to A&S academic programs would have to be approved by the Committee on Educational Programs (CEP), and, at the very least, this approval procedure is a practical way to monitor the extent to which departments and programs are increasing the requirements for their majors.

The faculty then approved the four recommendations of Faculty Council, with five faculty members voting against and five faculty members abstaining.

B. From the Committee on Educational Programs (CEP):

i. Proposed revision of the History major and minor. The revision adds two new concentrations to both the major and minor and clarifies the phrasing of the capstone course requirement. In response to a question, Professor Lunbeck, Chair of History, stated that there are enough courses in the two new proposed concentrations for students to fulfill the requirements. The faculty then approved the proposed revision.
ii. Proposed revision of the **Economics and History major**. The revision limits the amount of AP credit that can count toward the History component of the major. There were no comments or questions, and the faculty approved the revision.

iii. Proposed revision of the **English and History major**. The revision limits the amount of AP credit that can count toward the History component of the major. There were no comments or questions, and the faculty approved the revision.

iv. Proposed revision of the **Political Science honors program**. The revision eliminates the two-semester directed reading requirement. There were no comments or questions, and the faculty approved the revision.

v(a). Proposed new **student exchange program with McGill University**. There were no comments or questions, and the faculty approved the student exchange program.

v(b). Proposed new **student exchange program with the University of São Paulo and Federal University of Bahia** (Brazil). There were no comments or questions, and the faculty approved the student exchange program.

4. **Memorial Resolution for Lawrence J. Schaad, Professor of Chemistry, Emeritus.**

B. Andes Hess, Professor of Chemistry, presented a Memorial Resolution in honor of Lawrence J. Schaad, Professor of Chemistry, Emeritus. Faculty members paid their respects and signified their assent to the resolution by standing for a moment of silence. The Memorial Resolution is appended to these Minutes.

5. **Original Motion Calendar.**

No issues were raised.

6. **Good of the College.**

No issues were raised.

7. **Adjournment.**

The meeting adjourned at 4:55 p.m.

Respectfully submitted,

Kathryn H. Anderson,
Secretary of the Faculty
MEMORIAL RESOLUTION
FOR
LARRY SCHAAD

Some time ago I read in a College publication authored by one of our faculty members that before 1988 there were only a few brilliant professors at Vanderbilt. While I do not necessarily agree with that statement, it is for sure that Larry is one of those few brilliant professors, having arrived at Vanderbilt in 1961 as an assistant professor of chemistry. In fact, I am afraid that very few people at Vanderbilt realized how brilliant Larry was. He was not one to take the stage and blow his own horn. For an observer, a typical day at Vanderbilt for Larry was to arrive at 8 in the morning, teach his class, eat his lunch in his office, and leave for home at 5:30. Only a few knew that most of the day he worked diligently in his office devoted completely to his beloved research, but with the door to his office always open to students. I had the luck and pleasure to meet Larry not long after my arrival at Vanderbilt in 1968 and shortly thereafter began a collaboration with him that lasted for more than 40 years. I will try to share with you the picture of Larry I knew for all these years.

Larry had a very humble beginning, being born in 1930 in Ohio just when the Great Depression started. As a child he often changed schools as his father moved from town to town in search of work to provide for the family - Larry and his three younger siblings. But this did not prevent him from developing a deep love for science, in particular for chemistry, often expressed in his home chemistry experiments. He told me that often he bribed his younger siblings to turn over their allowances to him to buy chemicals for his next explosion.

In 1948 Larry was nominated for a Westinghouse Science Scholarship, the most prestigious science scholarship for graduating high school seniors. That year, of the thousands who were nominated, only 40 were winners, among them Larry, a graduate from Logan High School in Logan, Ohio. The vast majority of the others were from the best high schools in the Northeast and California. Interestingly of those forty winners that year, six of them, including Larry went on to be outstanding chemistry professors at major universities, and three of them became his classmates at Harvard.
Larry set out for Cambridge from Logan (that is not Logan airport, but rather Logan, Ohio) in September of 1948. The money his father had given him to take the bus to Cambridge, he saved by hitchhiking… and bought books instead. No doubt this was the beginning of his vast personal library that he built over the years. In his senior year at Harvard he was awarded a prestigious National Science Foundation Graduate Fellowship, in fact in the very first year they were awarded. He didn’t go far with the fellowship – he moved down the street to attend MIT, perhaps because Nancy was in Boston!

Having majored in biological sciences at Harvard (apparently being able to predict the future direction of chemistry), he chose to work for Professor Swain, a physical organic chemist – his first step to eventually becoming a theoretical chemist. Larry had the rare distinction of having his PhD work become a standard textbook item in the field of chemical kinetics. In fact, to this day, the equation that he derived, now known as the Swain-Schaad equation, is widely quoted in the literature. Just recently I was reading about the importance of the Swain-Schaad equation in a paper studying the mechanisms of biological reactions. Having seen the light and perhaps again looking into the future he decided to travel to Oxford (that is England, not Ohio) – again by unique transportation. He and his wife, Nancy, traveled by freighter to England, a trip that lasted three weeks with several ports of call along the way. At Oxford he worked with one of the most famous quantum chemists of the 20th century, Charles Coulson. One must remember that in 1956, there were no PC’s, not even any mainframes to speak of. Larry arrived there to find a room in Coulson’s lab full of technicians doing the “calculations” on mechanical calculators. After a second postdoc in the States (no email, no fast jets across the ocean made it virtually impossible to apply for a job from abroad), Larry joined the chemistry department at Vanderbilt in 1961. He soon made a name for himself in theoretical chemistry by carrying out the most extensive calculations for that time performed on the very simple molecule, H$_3^+$. In the process of these calculations he was banned for several years from using the university mainframe computer (yes, there was only one computer available to the college faculty at that time), because he had spent the entire yearly Departmental computing budget several times over in a very short period. Yes, one had to pay for computer time then – no gift from the Dean’s office of a PC powerful enough to perform theoretical calculations.
I had the good fortune to begin collaborating with Larry in 1970, after having read at that time a recent paper by Michael Dewar, and going to Larry saying, “I think Dewar missed something here, but I for sure don’t know what!” After reading the paper that evening, he came to me the next day and said yes, indeed Dewar had, and this is what he missed…. explaining in precise detail what we should do. Our paper was published in 1971 in the *Journal of the American Chemical Society*, and it became a standard topic in advanced organic and physical chemistry texts (second one of his career!). It is also the most highly cited paper published by a Chemistry Department faculty member in the last 40 years.

Larry continued to make major contributions, primarily in the area of theoretical organic chemistry. He published one of the first papers on the calculation of the infrared spectra of organic molecules, a tool that now has become routine. At a national meeting where these results were presented, John Pople came up afterward and said – that is really a good idea – I hadn’t thought of that – I must include the calculations of infrared intensities in my Gaussian program, (the program for which Pople later received the Nobel prize!)

Besides being a brilliant researcher, Larry was also a masterful teacher. He taught hundreds, if not thousands of aspiring chemists and premeds introductory physical chemistry. When I was Chair, Larry’s student evaluations were always among the best in the Department. Never was he too busy with his research to take a break and work with a student who came knocking on his door. One of his graduate students, who became a chemistry professor, told me recently that he had won several teaching prizes, because he had modeled his teaching after that of Larry’s. He said that during Larry’s lectures he had no time to think, only time to write notes on what Larry was presenting. But in evening when he went over the notes, they made perfect sense. Larry did not have a large number of doctoral students, but those that he did have went on to make a mark for themselves. Iran Thomas became a very high administrator in the Department of Energy. He passed away five years ago, but has a large auditorium named in his honor at Oak Ridge National Laboratory. Maurice Schwartz is a professor emeritus at Notre Dame; Vernon Hicks a professor of chemistry at Northern Kentucky University, Bruce Robinson, Professor of Chemistry, University of Washington, George Bass, Professor Emeritus of the Department of Pharmaceutical Sciences, University of Tennessee, Memphis; Edward J. Kansa, Professor Emeritus, University of California.
All in all I believe that you must agree with me that Larry was truly one of the brilliant professors at Vanderbilt these past almost 50 years. He published over 150 scientific papers and coauthored one book, Hydrogen Bonding, with Professor Melvin Joesten, Emeritus. His work will continue to be cited for generations to come.

Finally I would like to announce that through a generous gift of Nancy Schaad, the Lawrence J. Schaad Lectureship in Theoretical Chemistry has been established in the Department of Chemistry, the first of which we hope to hold on the occasion of his 80th birthday next September.

Madame Dean, I respectively submit this memorial resolution to be included in the Faculty Meeting minutes of the College of Arts and Sciences and a copy be sent to his wife, Nancy.

B. Andes Hess, Jr.
March 23, 2010