

**Department of Chemistry
Faculty Meeting Minutes
February 1, 2007**

Present: Babler, Ballicora, Baude, Becker, Chiarelli, Crumrine, Dias, Fitch, Florian, Freitas, Graham, Hall (Adm Asst), Herlinger, Holz (Chair), May, Olsen, Szpunar, Thomas

Absent: Boerger, Naleway, Schmeling

APPROVAL OF MINUTES OF DEC 7, 2006

The minutes were approved.

CHAIRPERSONS ANNOUNCEMENTS: DR. RICHARD HOLZ

- Summer School Registration Begins – 2/12

Congratulations:

- Dr. Schmeling – Felix Veryovkin-Schmeling was born on 1/2/07.
- Dr. Babler was honored before the men's basketball game on 1/27 as the "Professor of the Game"
- Dr. Graham (Course) and Don May (Instructor) – top evaluation Fall 2006.
- The Fall 07/Spring 08 teaching schedule has been e-mailed. There will be some adjustments to the Spring schedule and Dr. Holz will send the revision via e-mail. Dr. Szpunar inquired about an off semester course of Organic chemistry. Dr. Holz replied that we simply do not have enough faculty members to cover it. Dr. Holz said that he added an additional section of Chem 223 because of the large general chemistry enrollments but we do not have enough faculty members to add both an additional organic section and an off semester session. Dr. Holz asked the organic chemists to discuss which section they would prefer and get back to him early next week.

COMMITTEE REPORTS:

ORGANIC SEARCH – Dr. David Crumrine

We had 75 applicants and we phone interviewed six of them. We invited four applicants to interview. One of the applicants had accepted another offer and declined the invitation. We interviewed Drs. Brown, Daniel, and Youngblood. Questionnaires were sent out to all the faculty and graduate students. The averages came out to be, with 1 being the best, Youngblood 2.04, Brown 2.35 and Daniel 1.62. The committee and tenure faculty recommends offering the position to Dr. Daniel.

Motion by the Organic Search Committee: To Hire Dr. Daniel. Seconded by Dr. Fitch.
Motion passed unanimously.

Dr. Crumrine thanked the committee for their hard work.

CURRICULUM COMMITTEE – Dr. Chiarelli

➤ CHEM 101 CURRICULUM

The following is a list of topics that the curriculum committee recommends as mandatory for coverage in Chem 101.

- 1) **Matter and Measurement:** topics include the classification of different states of matter, units of measurement, and dimensional analysis (This is chapter 1 in Masterton and Brown, Lemay, Bursten (BLB)).
- 2) **Atoms, Molecules, and Ions:** This section is to include nomenclature for simple inorganic compounds but not organic nomenclature. (This is chapter 2 in Masterton and BLB).
- 3) **Mole Mass Relationships in Chemistry:** chapter 3 in Masterton and BLB.
- 4) **Reactions in Aqueous Solution:** includes concept of molarity, with an emphasis on balancing acid/base, precipitation, gas formation, and simple redox reactions. that involve half-reactions as specified in the activity tables presented in Chapter 4 of Masterton and BLB.
- 5) **Gas Laws** This is chapter 10 in BLB and chapter 5 in Masterton.
- 6) **Electronic Structure and The Periodic Table:** This section describes how the results of the Schrodinger equation for the electron distribution in the hydrogen atom are extended to other elements (s,p,d,f...) electron configurations, and shape and sizes of atomic orbitals. This is chapter 6 in Masterton and BLB.
- 7) **Periodic Trends:** These include atomic radii, electronegativity, and ionization potential. This is chapter is part of chapter 6 in Masterton and chapter 7 in BLB. Chapter 7 of BLB also does properties of metals, nonmetals, and metalloids as well as the characteristic chemical properties of the active metals and selected nonmetals.
- 8) **Basic Concepts of Chemical Bonding:** This section focuses on ionic bonding, drawing Lewis structures and describing the nature of covalent bonds. This is chapter 8 in BLB and chapter 7 in Masterton.
- 9) **Molecular Geometry and Bonding Theory.** This section describes the VSEPR bonding model and molecular geometry. We recommend that Molecular Orbital theory be taught in Chem 105, but not Chem 101. This is chapter 9 in BLB and second half of chapter 7 in Masterton.
- 10) **Thermochemistry** covers the first law of thermodynamics and basic aspects of calorimetry as well as enthalpies of formation and Hess' Law.
- 11) **Intermolecular Forces** This section includes interpretation of phase diagrams, phase changes, hydrogen-bonding forces, and other factors that influence melting and boiling points of solids and liquids. Material regarding the nature of crystal structures (cubic cells) would be covered in Chem 105 but not Chem 101. This is chapter 9 in Masterton and chapter 11 in BLB.

Motion – To accept the proposed Chem 101 standardized curriculum as was provided in the December 7th e-mail which stops at Intermolecular Forces. Seconded by Dr. Fitch.

Approved – 10

Opposed – 0

Abstentions – 4

➤ CHEM 102 CURRICULUM

Dr. Chiarlli asked, should we cover nuclear chemistry in chemistry 102. After much discussion the question was called. Should we include nuclear chemistry as a mandatory topic in chemistry 102 because, than Dr. Chiarelli will put it in the mandatory topics and redistribute it for next months meeting. VOTE – All in favor = 10, all opposed = 2, abstentions = 3. It will be included as part of the 102 proposed curriculum and we will vote on it in the March 1, 2007 meeting.

GRADUATE STUDIES COMMITTEE – Dr. Olsen

- 4th year fellowship – This is a new fellowship for the Graduate School. It will be slightly more than the amount in the normal TA stipend. It does not require teaching. The department will have to support them for the summer months (three months from the dept stipend funds). The students can get more funding from the university after getting this fellowship and in fact it is expected that 4th year fellows will apply for the Schmitt the next year. Finally the Graduate School will be giving out 20 of these. I'd like all third year students to apply. Note that if we do not get some of these fellowships we may not have enough stipend funds to support all of the current students in the Fall. My own personal opinion is that students who make the effort to get their own funding should be the first to be funded from TAships if their applications are unsuccessful.

- We are nominating Diana Pavlova for the Dean's Fellowship. It's a \$25,000 a year, guaranteed for five years, fellowship. It's for incoming students only. Jan is writing the nomination letter. As part of the package for her we will guarantee her a regular TA stipend with bonus. We would like to offer another regular TA stipend with bonus to Jessica Gereg. We have accepted a third student (Natalie Ann Lafranzo) but will not offer her a stipend unless some more become available.

- NRC Survey: Please fill these out as soon as possible. It is due by Feb. 15. The NRC will use the information to rank programs.

- The results of the "appropriate aspirational benchmarks" survey are, for the top 20, Northwestern and University of California at San Diego, and, for the 21 to 40 group, Rice and Pittsburgh.

- Non-Graduate School comment: My computer died recently. It turned out to be the mother board, but it was a scare to think that I could have lost the hard drive. Back-up hard drives are very cheap now – I got a 160 GB for \$65 – I suggest that everyone make that investment in their machines.

FUNDRAISING AND DEVELOPMENT COMMITTEE – Dr. Babler

Special thanks to Steve and Therese Sarussi and Drs. Bill Bauta and Mary Ellen Bos, for their generous donations to the University last month to support students conducting research in Dr. Babler's lab.

Announcement – Dr. Dias

Loyola Students can now study abroad in India. In Bangalore, University affiliation – Christ College and also in Delhi.

ADJOURNMENT – 12:45