REPORT OF GRADUATE COUNCIL
March 3, 2005

The Graduate Council approved the new course request BIOL 603 Advanced TEM Methodologies in Life and Material Sciences which was remanded back to Graduate Council for course hour correction.
BIOL603
Advanced TEM methodologies in Life and Material Sciences (TEM II)
Summer 2005

This 3-credit course in TEM has a strong emphasis on specimen preparation techniques for different applications, data acquisition, analysis and interpretation as well as artefact avoidance and recognition. This course normally requires successful completion of Fundamentals of Transmission Electron Microscopy (TEM I) or equivalent experience, i.e. demonstrated proficiency in the independent operation of a transmission electron microscope. This will be waived if specific needs to take this course can be demonstrated by the student. After evaluation by the relevant MIC teaching committee, permission to enroll in the course will be issued.

Course Description: This course is designed to provide students with advanced TEM methodologies including specimen preparation and TEM imaging/analysis techniques as applicable to both biological and material samples. Students will be equipped with the necessary theoretical background in support of a strong hands-on laboratory component comprising specimen preparation, different imaging/diffraction/spectroscopic techniques and data interpretation. The course is suitable for students in both, Life and Material Sciences and admitted candidates will, for this purpose, be divided into two cohorts.

Course format: The Life Sciences cohort meets on Monday and Wednesday and the Material cohort on Tuesday and Thursday.

Lectures and laboratory: There will be two 1-hour theory and application-oriented theory sessions (1-2 pm) per week for a period of five weeks. These sessions will involve theory of the techniques and practical applications with common and advanced protocols as well as algorithms to determine the best protocol or combination of techniques for the problem at hand. In addition to the theory and application-oriented theory sessions, there will be two 3-hour laboratory sessions (2-5 pm) per week over the entire 10-week period. These two laboratories each week will involve demonstrations by the MIC staff, hands-on experience by each student to re-enforce the theory sessions, and time for the students to advance their own research projects under lighter supervision. In addition to these scheduled hours, the students will spend approximately an additional 3 hours per week doing laboratory work (prep and TEM) at times that are suitable to them amounting to a total of 9 laboratory hours per week over the entire summer semester.

Homework: Each student is required to prepare a final write-up (see below).

Grading: There are two pieces of assessed coursework each accounting for 50% of the grade: an exam paper based on the lecture material probing the theoretical knowledge level attained, and a write-up in the style of a short research paper including an Introduction, Materials & Methods, Results and Discussion. The assessment of which takes into consideration as to whether the student is able to (i) correctly annotate and interpret the images/diffraction patterns, spectra etc. and (ii) critically appraise his/her results in the light of the relevant current literature.
THE AMERICANS WITH DISABILITIES ACT
The American with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the Department of Student Life for Students with Disabilities in Room 126 of the Koldus Building, or call 845-1637.

ACADEMIC INTEGRITY
The Aggie Honor Code: An Aggie does not lie, cheat, or steal, or tolerate those who do. Academic misconduct, a violation of the Texas A&M Honor System, involves any of the following: cheating, fabrication, falsification, multiple submission, plagiarism, and complicity.
For explanations and examples of what constitutes academic dishonesty visit http://www.tamu.edu/aggiehonor

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