1. Attendance:
   Aero – Rama Yedavalli
   AVN – Not present
   BME – Rita Alevriadou
   CHE – Not present
   CEGS – Robert Sykes
   CSE – Bruce Weide – Chair
   ECE – George Valco
   ENG PHY – Linn Van Woerkom
   FAB – Not present
   IWSE –
     ISE – Not present
     WLD – Charley Albright
   MSE – Rob Wagoner
   ME – Not present
   Graduate Student – Robin Ng
   Undergraduate Student – Laura Nash
   Secretary – Ed McCaul
   Guests – Robert Gustafson, Peg Steele

2. The Minutes from the 30 September 2005 meeting were approved as written.

3. Linn Van Woerkom presented the Course Proposal Subcommittee’s recommendations to the Committee.
   3.1. The following course proposals were recommended to be approved by the subcommittee: Aero 515, Aero 517, BioMed 706, ECE 706, CE 822, CE 862, ECE 714, ECE 816, ECE 874, and ME 811.
   3.2. The subcommittee recommended that MSE 711 be approved contingent upon receipt of a letter of a new syllabus reflecting the required ABET information.
   3.3. Linn Van Woerkom made a motion that the requests be approved with the contingency on MSE 711. Rita Alevriadou seconded the motion. A vote was taken: 10 approved, 0 opposed, and 0 abstentions. The motion passed.

4. The committee was informed that Curriculum Proposal Subcommittee A will be meeting on Friday the 4th of November to discuss the GEC Transition Policy.

5. Bob Gustafson updated the committee on the GEC Proposal.
   5.1. Right now we are in an information collection phase trying to find out why some items were approved and why some were not. As part of this, Bob has had a discussion with since CAA’s minutes do not tell us much about
their discussions Randy Smith. Randy will have someone go back over the tapes to see what can be found.

5.2. Bob stated that the current policy of CAA of asking us to leave the room when they are discussing any of our proposals severely limits our understanding of the reasons behind their actions. The comment was made that this would be a good topic to include in the letter that is being prepared concerning our disappointment with CAA’s very limited formal response to our proposal. It was decided that this letter will come from Bruce rather than Bob.

5.3. The question was asked if CAA’s policy of excluding the proposing unit from their discussions is even legal. It was decided that while it may not be, it would be best not to bring that up in the letter.

5.4. George Valco was asked to try and find out why CAA does not currently allow proposing units to stay for the discussion of their proposal.

5.5. It was decided that all of the GEC changes would be implemented starting autumn quarter 2006 and not implement the 597 Capstone Course substitution immediately. It was pointed out that if a student wanted to do this that they could submit a petition.

6. Rita Alevriadou briefed the committee on the current status of the Biomedical Undergraduate Degree Proposal.

6.1. All members were given a handout (attached) that shows the seven tracks that are currently being considered as well as an example of how one track could be structured.

6.2. The dean has requested that the proposal be given to him in December.

6.3. The proposal is still a work in progress.

6.4. Currently, there are tremendous variations between the various tracks.

6.5. The floor was opened for discussion.

6.5.1. The question was asked as to how the pre major program would be structured. The response was that this is something they are still considering.

6.5.2. The comment was made that it appears that the proposal still needs a lot of work and that it may be hard to meet the dean’s December deadline.

6.5.3. The comment was made that Biomedical may need the assistance of an experience undergraduate advisor.

6.5.4. The question was asked as to whether program objectives have been created. The response was yes.

6.5.5. The question was asked as to whether or not Biomedical is considering eventually applying for ABET accreditation. The response was yes. The comment was then made that they may want to look at some of the self studies that the accredited programs have just written.

6.5.6. The comment was made that they may want to consider how co-op/intern friendly their program will be.
6.5.7. The comment was made that they need to make sure that they include information on what the core knowledge of the discipline is in the proposal.

6.5.8. The comment was made that Biomedical may need some outside help. It was pointed out that the handout shows that experience people from outside of Biomedical are already involved.

6.5.9. It was suggested that they make an appointment to talk with Randy Smith as he is a good source of information about what needs to be included in such a proposal.

7. The meeting was adjourned at 11:30 AM.

C: College Faculty
CCAA File
Update on BME Undergraduate Major Planning Committee

7 tracks & Subcommittee Chairs (Committee Chair: Dr. Cynthia Roberts) (proposal will be submitted to the Dean in Dec 05):

ChBE BME track               Rita Alevriadou
Biosignals & biosystems (EE) BME track  Bradley Clymer
Bioinformatics (CSE) BME track   Bradley Clymer
Biomaterials BME track          John Lannutti
Biomechanical BME track         Nicep Berme
Human factors BME track         Steve Lavender
General BME track               Pre-med (Bruce Biagi)

Curriculum:
GEC
Engineering Core: Required and Selected
Required BME track-specific courses (some from BME but primarily from other Eng Depts)
Required BME courses (common to all tracks), including a Biology lab (Stephen Lee) and Capstone design (Ann Christy)
BME electives (from BME but primarily from other Depts)

Example: ChBE track in BME (or give it another name: Cell/tissue engineering or transport processes & tissue engineering track?) (still work in progress; proposed by a subcommittee: Drs. Rita Alevriadou, Jeff Chalmers, Mike Paulaitis)

Selected Eng Core (total of 40 credits):
Under Additional Science: 4 courses (18)
   Biological Science Biology 113 (5)
   Chemistry 122 (Gen Chem) (5)
   Chemistry 123 (Gen Chem) (5)*
   Chemistry 251 (Organic Chem) (3)
Under Mathematics and Statistics: 2 courses (9)
   Math 415 (Ord & Part Diff Equ) (4)
   CE 405 (Probability and/or Statistics) (5)
Under General Engineering: 4 courses (13)
   CIS 202 (Intro Programming) (4)
   ChBE 200 (Mass Balances) (3)*
   ChBE 201 (Energy Balances) (3)*
   EE 300 (Circuits) (3)

Required track-specific courses (6 courses):
ChBE 420 (Momentum Transport)
ChBE 522 (Mass Transport)
ChBE 508 (Thermodynamics I)
ChBE 610 (Kinetics)
Biochem 511 (Biochemistry) (from the Biochemistry Dept, College of Biological Sciences)
Physiology 311 (Principles of Human Physiology I) (from the Dept of Physiology & Cell Biology, College of Medicine & Public Health)

**Required BME courses (all tracks):**
BME 500 (Introduction to BME)
BME xxx (Biology Laboratory for BMEs; equivalent to IBGP 805)
BME xxx (possibly 581, 582) (Capstone Design in BME)
BME 694 Cell & Tissue Engineering (limited to senior BMEs) (not all tracks may agree on this, so probably it will move to BME electives for this track)

**A list of BME electives for this track:**
BME 631 Fundamentals of Biomaterials
BME 721 Biological Transport (limited to senior BMEs)
BME 732 Soft-Tissue Biomaterials (or a new course equivalent to this, but an undergraduate version)
BME 739 Biopolymer Structure and Function (or a new course equivalent to this, but an undergraduate version)
BME 741 Tissue Mechanics (or a new course equivalent to this, but an undergraduate version)
BME 761 Biomedical Nanotechnology (or a new course equivalent to this, but an undergraduate version)
BME xxx (Physiological Fluid Mechanics)

**More info about the required BME courses (all tracks):**

**Capstone Senior Design Course in BME** (BME 581, 582) (proposed by Dr. Ann Christy)
Course description: Practice in the design and communication of a biomedical device or system within the student’s area of specialization.
Objective: The capstone senior course will be designed such that students, working in 3-4 person teams, apply their accumulated knowledge of BME to solve a problem in a project-oriented environment. The course will be designed to teach students how to work with a customer/patient/sponsor to develop a proposal, to execute the project work scope, and to report their results in oral, written and audio/visual formats.

**Biology Laboratory for BMEs** (equivalent to IBGP 805) (proposed by Stephen Lee)
This course will be offered summer quarter each year (a 6-credit course for students who have finished their junior year). It will be designed to meet three goals: (a) Provide the students with basic laboratory safety training before they begin working in laboratories. (b) Introduce the students to techniques commonly used in biomedical research. (c) Inform the students about the resources available at OSU. Classes will consist of an introductory lecture followed by a laboratory session in which the students will perform experiments (some topics will be: cell culture, immunological assays, molecular biology techniques, histology, microscopy, etc.).

**BME 500 Introduction to BME** (is being offered as a 3-credit course; Instructor: Derek Hansford)
Course description: Introduction to the engineering aspects of life sciences utilizing lectures from engineering, medicine and life sciences. Objective: At the end of the course, students
should be able to: (a) apply engineering principles to biomedical applications, (b) understand the complexity of biological systems, and (c) be familiar with various BME fields.
A week of lectures is devoted to each of the following topics: clinical engineering, bioinstrumentation, biomedical sensors, physiological modeling, biomechanics, biomaterials, tissue engineering, biomedical imaging, and biomedical diagnostics.