

Meeting Minutes: Committee on Physics and Astronomy

Meeting Minutes

Academic Advisory Committee on Physics and Astronomy

April 11, 2004

Middle Georgia College, Cochran

The meeting was convened at approximately 10:30 AM with the following members present: K.C. Chan (Albany State University), Leon Jaynes (Armstrong Atlantic State University), Ron Ezell (Augusta State University), Tatiana Krivosheev (Clayton College & State University), Ntungwa Maasha (Coastal Georgia Community College), Tsun-Hsiung Kao (Columbus State University), David Wycherley (Dalton State College), Michael Pangia (Georgia College & State University), Michael Schatz (Georgia Institute of Technology), Mariam Dittmann (Georgia Perimeter College), Arthur Woodrum (Georgia Southern University), Stefan Dieters (Georgia Southwestern State University), William Nelson (Georgia State University), Rolf Schimmrigk (Kennesaw State University), Michael Torbett (Macon State University), Imad El-Jeaid (Middle Georgia College), Kailash Chandra (Savannah State University), Michael Thackston (Southern Polytechnic State University), Javier Hasbun (State University of West Georgia), Chris Wozny (Waycross College), Dorothy Zinsmeister (BOR)

1. The minutes of the 2003 meeting were approved.

2. Discussion of the Learning Outcomes Statements

a. Algebra-based Physics

The Learning Outcomes statement was developed and circulated electronically during the last year. The statement was presented and discussed. Concerns brought up included the following:

1. There is a mismatch between the course descriptions and the content-based learning outcomes (LO). It was pointed out that the mismatch occurs because the document is intended to reflect only those topics that are taught in these courses by all of the institutions. Dorothy Zinsmeister spoke about the purpose of each of these documents. In her discussion, she indicated that it is not our prerogative to ignore the course descriptions and include ONLY in our courses the topics that are currently addressed in the LO. She further indicated that it is not our prerogative to ignore course descriptions and include only the topics that we want to teach.
2. There is not enough time in a term to teach in detail all of the topics to be included.
3. Computer simulations should appear in General Learning Outcome 3. It was decided that simulations are inferred in outcome 5.
4. There was not enough emphasis on the laboratory portion of these courses. The phrase "in a laboratory session" was added to General Outcome 4.

After considerable discussion, the document was approved as amended as a working document to be reviewed annually and updated as necessary.

b. Calculus-based Physics

The Learning Outcomes statement was developed and circulated electronically during the last year.

The statement was presented and discussed. Concerns brought up included the following:

1. The mismatch in this document between the course descriptions and the content-based learning outcomes was also pointed out and discussed.
2. The concept of the cross product in vector multiplication was left out. It was decided to add term to the content-based outcome of vector multiplication.

After considerable discussion, the document was approved as amended as a working document to be reviewed annually and updated as necessary.

c. **Astronomy**

The Learning Outcomes statement was developed and circulated electronically during the last year. The statement was presented and discussed. Concerns brought up included the following:

1. An outcome dealing with the nature of light appears in both ASTR 1010 and ASTR 1020. It was pointed out that since the courses not a sequence at many institutions, light had to be covered in both courses.
2. The labs associated with these courses are not all 3 hours in length. The document will be adjusted to reflect the variety of lab options available.
3. The nature of gravitation should be included as a topic in both courses. It was added to the statement dealing with the nature of light.
4. The formation of the solar system and the origin and evolution of the universe should be included in the section of topics that students are "to demonstrate the knowledge and understanding of".
5. Students should be asked to demonstrate knowledge and understanding of the nature of stars in addition to the classification of stars.

After considerable discussion, the document was approved as amended as a working document to be reviewed annually and updated as necessary.

3. **Other Old Business**

Dorothy Zinsmeister asked about the status of recommendations for changes to area F requirements. Area F allows the following: PHYS I & II, CALC I, II, & III and additional hours in ASTR, MATH, CSCI, and CHEM. It was suggested that we add the option of additional hours in PHYS to allow new courses to be developed and inserted into the curriculum. This was approved unanimously. A question was raised about the appropriateness of the addition of ENGR courses to area F. This was not approved.

The status of the Physical Science major was discussed. It was decided that it be removed from the list of approved programs provided that no Regent's institution offers that program.

The status of area F for astronomy was discussed. Since a BS in astronomy is only offered at Valdosta, Dorothy agreed to contact that institution for verification of Area F for astronomy.

4. **Election of Executive Committee and Chair-Elect**

Michael Pangia was nominated and elected as chair-elect for next year. He represents the four-year colleges group.

Mike Torbett will be the 4 year college executive committee representative. Todd Baker will be the research and regional institution executive committee representative.

Imad El-Jeaid will be the 2 year college executive committee representative. Mariam Dittmann will be the chair and William Nelson will be the past-chair.

5. **New Business**

There was no new business.

6. **Announcements**

Chris Wozny announced that 2005 is the year of physics.

The SACS-AAPT regional meeting will be held in Spartanburg, SC in September. There will be a competition to identify the best modern physics demos. The SACS-AAPT is wanting to identify a research university that would be willing to host the spring meeting. Faculty should consider inviting physics teaching majors to come to these meetings.

Charlie Kao from Columbus State University is retiring after 37 years of teaching.

7. The meeting was adjourned at about noon.

Respectfully submitted,

Mariam Dittmann
Georgia Perimeter College

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