

## SITS 2011



## NEWSLETTER

**New Faculty****2**

Marc Chetta, Derrick Glasco, and Robert E. Lee joined the BJU faculty and participated in SITS.

**Feedback****3**

Judging from the feedback received from faculty participants, SITS 2011 was clearly a success.

**Nuts & Bolts****4**

- Session sampler
- Courses affected
- Funding
- Plans for SITS 2012

## New Track Certification Process Designed and Implemented

Three 2011 participants earn Track 1 certification.

From its inception in the summer of 2004, the BJU Summer Institute in Teaching Science (SITS) has been focused on three major elements of effective teaching: Clear-thinking teachers, clear classroom communication, and substantive student assessment. The practical consequence of this focus is that SITS has always been structured around three tracks, with each focusing on one of the three major elements.

Each track consists of a series of sessions designed to provoke thought and promote faculty self-assessment in

matters being discussed. Each faculty member is required to demonstrate understanding and application of their track to one of their courses that they are working on for the summer. In SITS parlance this course is referred to as their *target course*.

Track-specific goals pertaining to target courses have always been incorporated into SITS, and each participant's progress has been checked throughout the summer. This year, however, participants were subjected to a certification process based on their levels of performance in

achieving Track 1 goals. This process was facilitated by the Desire2Learn® distance-learning environment recently implemented in BJUOnline.

We are pleased to announce that Bob Hill (physics), Robert Lee (chemistry), and Patrick McGary (engineering) are our first Track 1 Certified SITS participants.

We plan to begin certifying participants in Tracks 2 and 3 during the summers of 2012 and 2013, respectively, as well as to continue certifying participants in Track 1.



## New Faculty

The BJU Division of Natural Science is in the midst of a generational change in its faculty.

The success of graduates from the engineering, pre-med, and science programs at BJU is the result of dedicated faculty, high-quality facilities, and the Bible-based liberal-arts environment our students are immersed in. Increasing enrollments make it necessary to add new faculty, and retiring long-time faculty must be replaced.

Science and engineering faculty at BJU must be professionally competent, dedicated to high-quality undergraduate education, have a passion for making their students into disciples of Christ, and have a burden to teach at Bob Jones University. Such people are not easy to find, but God continues to bring us together.

Marc Chetta earned his B.S. in zoology from the Louisiana State University (Baton Rouge, LA) in 1974 and his M.D. from the Louisiana State University Medical Center (New Orleans, LA) in 1978. Marc joined the Biology faculty in January of this year and has been teaching Anatomy and Physiology lecture and lab. This fall he will also begin teaching Physiology and Anatomy, a new physiology-focused course for students majoring in biology or pre-med.

Robert E. Lee is replacing John Wolsieffer, who retired in May after teaching at BJU for 37 years. Dr. Lee earned his B.S. in chemistry from the University of Tennessee (Knoxville, TN) in 1981 and his Ph.D. in organic chemistry from Purdue University (West Lafayette, IN) in 1986. This fall he will teach Instrumental Analysis lecture and lab and Physical Science lecture and lab.

We thank the Lord for adding these people to the faculty of the Division of Natural Science, and we are grateful that they were able to participate in SITS 2011. Thank you for praying for us as we continue to serve the Lord together.



Marc Chetta, M.D.  
*Biology*

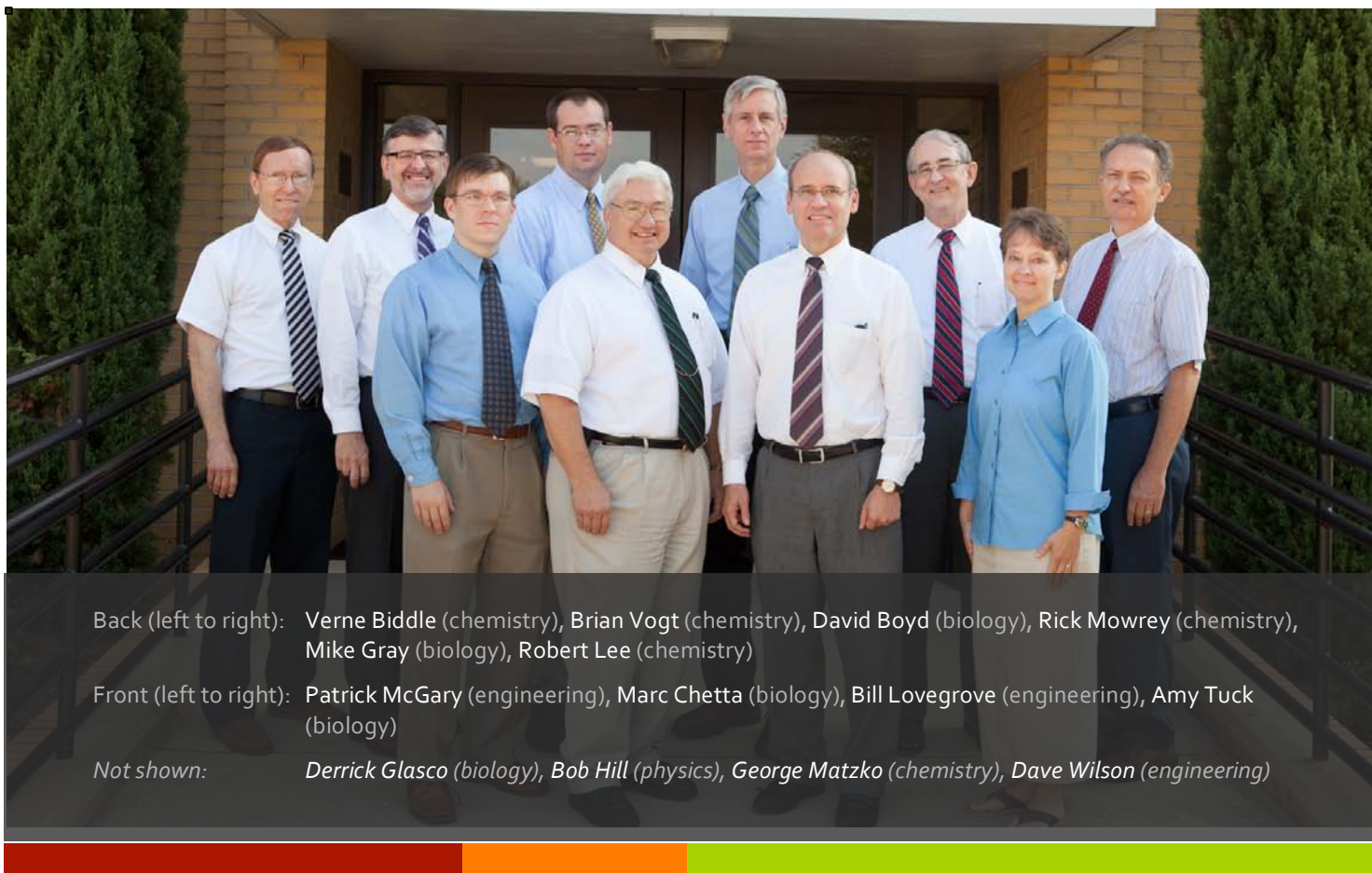


Derrick Glasco, Ph.D.  
*Biology*

Derrick Glasco earned his B.S. in biology from Missouri Southern State University (Joplin, MO) in 2004 and his Ph.D. in biological science from the University of Missouri (Columbia, MO) in 2011 (anticipated). This fall Dr. Glasco will be teaching lab for General Biology and Essentials of Cell Biology.



Robert E. Lee, Ph.D.  
*Chemistry*



Back (left to right): Verne Biddle (chemistry), Brian Vogt (chemistry), David Boyd (biology), Rick Mowrey (chemistry), Mike Gray (biology), Robert Lee (chemistry)

Front (left to right): Patrick McGary (engineering), Marc Chetta (biology), Bill Lovegrove (engineering), Amy Tuck (biology)

Not shown: Derrick Glasco (biology), Bob Hill (physics), George Matzko (chemistry), Dave Wilson (engineering)

## Representative Feedback

“This year I have had the opportunity to have the first year’s lessons reinforced with additional instruction that I believe will help me consolidate my gains and further move my courses to a question driven format. Another area where I hope to make progress is in my ability to explain concepts. I need to slow down and build my explanations carefully, making clear my strong intention to help the students learn.”

“The camaraderie that is built during the summer continues through the school year. I have been able to benefit from my colleagues’ expertise because we have a friendship that is conducive to seeking each other’s help and advice.”

[As a result of SITS] “I am no longer in bondage to the coverage model or to PowerPoint [presentations]. I feel that I am free to explore the principles, concepts and big ideas that students need to grasp and come away with so they can in turn extrapolate and apply this understanding to new unfamiliar territory in their professional lives.”

“My target course will now focus on a few big ideas ... instead of a data dump of textbook facts.”

“It was encouraging to be able to analyze my student evaluations and look for patterns to focus on rather than simply trying to forget the few hurtful comments that you typically remember. It was also a good time to pass your wares through your colleagues. It can be tense, but it’s a good feeling when your colleagues learn something from you because of your teaching.”

“There is a danger in scientific disciplines that are very mathematical of focusing too much on the equations that describe a system and not placing the appropriate emphasis on developing insight into what is “really happening” in a physical system. This is particularly true for those of us who really love math. I’ve spent time trying to understand and master the atomic-scale models that scientists have developed to describe systems and the changes they undergo. I plan to emphasize these models in my target course so the students will be able to understand the physical reality that underlies the equations we will use.”

## Nuts & Bolts

### Session Sampler

How Do We Teach a Way of Thinking?  
Big Ideas *versus* Principles  
A Good Name  
What is Lab For?  
How Do Students Learn?  
The Importance of Explanation  
Assessment in Lab

### Courses Affected

Organic Chemistry I & II Lab  
Physiology and Anatomy I & II  
General Physics I Lab  
Inorganic Chemistry  
Invertebrate Zoology  
Thermodynamics & Statistical Mechanics  
Materials Engineering  
Solid State Applications  
Microbiology  
Computer Systems  
Biochemistry I & II Lecture & Lab  
Essential Science  
Instrumental Analysis Lecture & Lab  
Physical Science Lecture & Lab

### Funding

The budget for SITS 2011 was about \$104,000, representing a \$33,000 increase over the SITS 2010 budget. This is due primarily to two things. First, SITS was increased in length from 8 weeks to 10. Our participants were greatly blessed by the additional time made available to work on their courses. Second, we had 14 participants this year as opposed to 12 in last year's program.

SITS is funded by investment interest accrued by the Science & Engineering Endowment Fund (S&EEF). More information may be found at this page:

<http://www.scienceendowment.org>

We particularly appreciate the fact that it is possible to conduct SITS even during challenging economic times. This is the result of the generous gifts of our donors, good stewardship by those managing the S&EEF, and the support of the BJU executives and administration.

### SITS 2012

During 2010 and 2011 we used a new format consisting of three weeks of concentrated sessions followed by several weeks of preparation. This format has worked very well and we intend to use it again in 2012. Having 10 weeks total worked so well this year that we are planning to do the same next year.

As indicated earlier, we expect to phase in certification criteria for Track 2 in 2012 and to continue certifying participants based on their performance.

*To God be the glory.*

