CHEMISTRY
Strategic Planning Department Meeting
March 30, 2012    10:45 – 11:45 AM

Presentation

- Handouts
- Last IPR was in 2009
  - Have accomplished many of the recommendations
- Generate 6% of the credit hours
- MLS accreditation will be reviewed again in 2014
  - Expect to fill their cohort
  - 100% pass rate on national exam
  - Only accredited MLS program in the BOR system
  - Planning for a clinical masters program
    - It is covered by their accreditation
- Largest Ph.D. program in the University
- Undergraduate research is a requirement for Chemistry and Biochemistry undergraduate degrees
- Resources needed
  - Funding for tenure/tenure track faculty
  - Space
    - Took over a conference room and made it into an instrument lab
      - May need more changes
      - Outgrew their space rapidly

Tell us more about the extra section situation? Are we meeting the needs?

- About one-half of sections for freshman are extra sections
- Sections were running at about 90-95%
  - As part of the budget cut they have moved that to 95-98%
- Block scheduling prevents people from getting into certain sections
  - Some departments have asked for more seats than the number of students
- Probably adequate for number of lecture sections
  - Have other delivery methods impact labs?
    - 114 is problematic for some majors in the Spring
    - Biochemistry in the summer needs more seats
    - If that’s a funding issue, let the Provost know
    - These are probably related to lab capacity and not lecture
    - In Biochemistry have disassociated the lab from the lecture
      - That should help with enrollment issues
• MLS students are struggling getting into Physiology
• 114, Biochemistry and Physiology are ones the Provost is hearing are problems from around campus

BOR approved this week a new fee for this department
• There may be questions that come from stakeholder
• The Department should be prepared to respond
• Messaging is important
• Amount approved is less than what was requested
• Will need to review and revise the budget
• Still not clear if it extends to MLS program
  o Probably not since they use a different prefix
• Can put together a plan on how to address pressure points

SDSU is turning toward a more research-based education model
• Of concern is the ability to attract they type of graduate students we want
• Would like full tuition forgiveness and health insurance
• As we compete for students, they look at the net
• BOR passed a tuition policy
  o Differentiated the Ph.D. granting institutions from the other campuses
    ▪ Now can bring forward policies that are unique from undergraduate only schools
• Differentiation should allow us to advance in new ways
  o E.g. because of large fees, the difference between out of state and in state pricing is not as distinct
• International students would like more health care choices
• There was also a recognition in the inequity in funding
  o With a shift of dollars to BHSU, SDSU is the next least well-funded
• One-time money
  o A percentage ($3 million) will be allocated based on grad rates
  o Have a short time to determine how to allocated these funds
    ▪ 3 -3½ weeks
• The number of graduate students isn’t increasing as fast as research dollars
  o Can increase the amount of stipends
• For domestic students could have assistantships be higher
• We can bring these forward to the BOR for consideration
• Also think about raising private resources for fellowships
• May have to revise Graduate School policies
• Need to do a better job of explaining the health insurance
Particularly for international students

- Credential review for international students
  - Costs money and creates time delay
  - Fee is significant
    - Students perceive they are getting charged twice
  - Also require them to have a diploma before we’ll review their transcripts
    - Means we have to wait for them to graduate (for international students)

What are the roles to break down research silos?

- Relationship building is primarily the role of the individual researcher
- Kevin’s office could assist with match making
- Important for newer faculty or for people switching their research focus

How to integrate trans-disciplinary training? How to recruit graduate students to these programs and integrate them?

- Want strength in the discipline
- Lower barriers to entry
- MLS is new in the Allied Health world on campus
  - they are working hard to develop relationships
- Maybe joint appointments are a possibility
  - Salary could still come from one place
  - There could be easier associations
- Maybe need to provide guidance on how to develop joint appointments

Pay attention to efficiencies

- Have to hand type grads into Web Advisor
  - Why can’t they just be moved from D2L
- Correspondence that goes to the faculty member instead of to technician
- Grad applications are a lot of paperwork for faculty
- There are duplications that need to be managed

Online application needs to be managed
CBC Undergraduate Program Status

- 2 degrees offered
  - Number of majors FY11:
    - 47 majors in B.S. Chemistry - ACS Certified
    - 38 majors in B.S. Biochemistry
      - 15% increase in chemistry since 05; 67% increase in biochemistry since 05
  - Number of T/TT faculty FY12: 10 (1 vacancy)
  - Number of research faculty/lecturers in FY12: 3/6
  - Credit hours generated in FY11: 18,083
    - C/R - 5% of institutional cr. hrs. (16 T/TT faculty)
    - Math/Stat - 8% of institutional cr. hrs. (19 T/TT faculty)
    - Bio Micro - 7% of institutional cr. hrs. (24 T/TT faculty)
  - Number of lab sections offered has doubled since AY2002/2003
  - Comparisons to SDSU's peer/aspirational peer institutions:
    - Ranked 2nd of 9 - number credit hours generated
    - 1532 credit hours/faculty member.
    - Ranked 7th of 9 in number of T/TT faculty

Credits Hours Generated per T/TT Faculty Member in Chemistry Departments at SDSU & its Peer/Aspirational Peer Institutions
Current CBC Strategic Plan
Undergraduate Program Accomplishments

- Developed and implemented B.S. biochemistry in response to student request/need
  - Significantly revised in AY 2010/2011
- Redesign of undergraduate ACS accredited chemistry curriculum
  - Expand course offerings, increase rigor, and encourage UG research
  - Extramural funding to support freshman & sophomore CBC majors’ laboratory redesign (NSF TUES award in FY11)
  - Instructional innovation: e.g., CHEM 114 recitation sections (SIRU AU award in FY12)
- Continuing recipient of Hach Scientific Fellowships to support secondary chemistry teaching majors
  - $5,000/yr renewable for up to 4 years
- Significant participation in the Honors College
  - 4 courses offered/year since 2007

Next CBC Strategic Plan
Undergraduate Program Planning

- Increase # of majors in all degree tracks
  - Including secondary chemistry teaching majors
- Increase peer-reviewed publications resulting from UG research participation
  - Now required of all CBC majors
- Pursue IPR-AAAS recommendation to increase T/T faculty to ease teaching loads
- Become recognized campus leader in educational innovation
- Become a recognized regional/national leader in producing a technically skilled workforce and secondary chemistry educators
- Increase ties to the private sector and international partners to expand opportunities to enhance UG education
- Secure funding external to continue enhance instructional program
MLS Undergraduate Program Status & Accomplishments

- Initial national accreditation for maximum time allowed in AY 2010/2011
  - 4 faculty (1 T/T faculty, 3 instructors)
  - Affiliations with ALL major health systems in the region
  - In AY 2012/2013
    - 17 students in Yr 2 cohort, 22 students in Yr 1 cohort, ~25 students in pre MLS cohort
    - 100% Pass Rate on National Board of Certification Exam
    - 100% Positive Placement of Graduates
- On-line “Upward Mobility Program” to be offered beginning in F12
  - 22 applications for 1st cohort in AY 2012/2013
- Hosting ASCLS-SD Professional Meeting at SDSU in FY13

Next MLS Strategic Plan Program Planning

- Implementation of a unique “Virtualize Laboratory” experience to improve student learning (Fall 2013)
- MLS “Upward Mobility” cohorts fully subscribed (F14)
- Build collaborations with BOR institutions and associate degree programs to enhance expand student learning opportunities and workforce development within state & region
- “Intent to Plan” M.S. degree in MLS (Fall 2015)
CBC Graduate/Research Program Status

- Research focus areas
  - Biochemistry/Biophotonics
  - Environmental/Green Chemistry
  - Chemical Education
- Faculty
  - Research active: 13 (T/TT & research faculty)
  - Vacant positions: 1 T/TT
  - Recruiting: 1 research faculty
- Graduate students
  - Current: 55
  - Grant-supported: 18
  - US DoEd GAANN award

CBC Research Program Status

Annual Research Funding Trend

- Total Funding Allocation
- IP Disclosures
- Number of faculty

Fiscal Year
Next CBC Strategic Plan
Graduate/Research Program Planning - 1

- Maintain research productivity ($150,000/year per research active faculty member)
  - Total research funding to $2.5 M by 2015 w/ current # of faculty
- Increase quality of incoming graduate students
- Increasing funding in chemical education area beyond current DoEd and NSF awards
- Achieve AAAS recommendation for 20 T/TT faculty
  - Would increase annual competitive awards to $3.0 million
  - Would ease teaching loads
  - Will require investment in start-up funds, research space and support staff

Next CBC Strategic Plan
Graduate/Research Program Planning - 2

- Continue to build the 3 umbrella research focus areas
  - Increase number of active T/TT researchers
  - Growing need for research support staff
    - Technical
    - Protocols
- Examine need to strengthen organic, inorganic & physical chemistry areas
  - Also impacts needs of undergraduate program
- Space
  - Current research space accommodates 80 researchers
  - ~50% of these workstations are currently filled by graduate students, postdocs & research technicians
  - Does not include undergraduate research
The MLS Program projects a doubling of graduates from the Bachelor of Science on-campus program since the transition to the 2+2 program model. The Upward Mobility program is projected to be full in the first year of offering the program.

The SDSU MLS Program maintains an average score that is above the minimal passing score. Scores have stabilized and the program can now focus on improving overall passing scores.
The MLS Program has a 100% overall pass rate between first and repeat attempts. The program has only had 1 repeat attempt in 5 sessions. The pass rate for the MLS program surpasses both the University and National average pass rates.

The MLS Program receives donations from industry and private donors and is well on pace to surpass the previous years’ donations.