Preparing a New Generation of Heroes For Our Nation’s Schools

Board of trustees Meeting
October 11, 2012

Gerardo M. Gonzalez
Dean
Summary of Major Points from Trustees K-12 Forum at IUPUI

• Schools of Education should be very selective
• Content should be represented by a B.A. in some form
• Fieldwork and observation are very important
• The quality of education research is lacking
Preparing the State’s Best Teachers

Superintendent Tony Bennett with 2012 Indiana Teacher of the Year Melanie Park, BS’93 in Elementary Education, MS’01 in Language Education and 2011 Indiana Teacher of the Year Stacy McCormack, BS’99 in Science Education.

http://youtu.be/UZxcgkhZEk
Admission Requirements

• All education students must meet IU admission requirements
• Have at least 1100 in the SAT or pass a Praxis test of basic skills
• Complete or be enrolled in 26 hours of pre-education, math and science courses
• Maintain at least a 2.5 GPA in mostly College of Arts & Science courses
Challenge: How Do We Recruit the Most Academically Talented Students to Teaching?

<table>
<thead>
<tr>
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<th>All IU Undegrad</th>
<th>Fall 2012 Beginners</th>
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</thead>
<tbody>
<tr>
<td>All</td>
<td>1190</td>
<td>1202</td>
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<tr>
<td>Education</td>
<td>1132</td>
<td>1160</td>
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Direct Admits
Class of 2012

• A total of 88 DA students admitted
• Average SAT 1220
• Average High School GPA 3.85
• 14 percent plan to major in STEM area
• 12 percent minority
• One Wells Scholar and the 2012 Indianapolis Star’s “Sportswoman of the Year” among the class
Challenge: How Do We Assure That Education Students Content Preparation Equals That of Disciplinary Majors?
Secondary Education Content Requirements are At Least Equal to B.A. in Disciplinary Majors

BS in Math Education

Analysis  
- M211 - Calculus I  
- M212 - Calculus II or M213 Accelerated Calculus  
- M311 - Calculus III

Algebra  
- M301- Linear Algebra and Applications or M303 Linear Algebra for Undergraduates  
- M391 - Intro to Mathematical Reasoning  
- M403 - Intro to Modern Algebra or MT403 Intro to Modern Algebra for Secondary Teachers

Probability and Statistics  
- M365 - Intro to Probability and Statistics

Geometry  
- M336 - Topics in Euclidean Geometry

Applied Mathematics  
- M447 – Math Models and Applications

Computer Programming  
- M371 – Elementary Computational Methods

Mathematics Electives Above 300 Level  
- 6 Credits

BA in Mathematics

- M211-M212, M211-M213, or M211-S212.  
- M301 or M303, and M311.  
- Five additional courses representing at least two of the eight areas of mathematics listed below. Of these, two courses must be 400-level "M" courses. If courses are chosen from only two areas, the two 400-level "M" courses must occupy distinct areas:
  - Algebra and Number Theory: M403, M404, M405, M409, M453.  
  - Analysis: M312, M413, M414, M415.  
  - Differential Equations: M343, M344, M441, M442.  
  - Logic: M391, M482.  
  - Mathematics Education and History: T336, M380, T403.  
Secondary Education Content Requirements for Chemistry Education and B.A. in Chemistry

BS Chemistry Education

• Students must complete the following coursework with a minimum of C or higher in each course:
  • **Major requirements** 27 Credits
    • C117 - Principles of Chemistry and Biochemistry
    • C341 - Organic Chemistry I Lectures
    • C342 - Organic Chemistry II Lectures
    • C343 – Organic Chemistry I Lab
    • C360 – Organic Intro to Physical Chemistry or C361 – Physical Chemistry of Bulk Matter or C362 – Physical Chemistry of Molecules
  • In addition, students must have an additional 11 credits in chemistry from the following:
    • C118 or C330, C314 or C318, C317 and C318, C315, C316, C344, C364 or C464, C430, C432, C437, C443, C460, C481, C483 or C484 and C485

BA in Chemistry

• Students must complete the following course work with a minimum grade of C– in each course:
  • **Major Requirements**
    • C117 - Principles of Chemistry and Biochemistry I or C105 & C125
    • C341 - Organic Chemistry I Lectures
    • C342 - Organic Chemistry II Lectures
    • C343 - Organic Chemistry I Laboratory
    • One of the following:
      – C360 - Introductory Physical Chemistry
      – C361 - Physical Chemistry of Bulk Matter
      – C362 - Physical Chemistry of Molecules
  • Physics P201 & P202
  • Mathematics M119 or M211
  • In addition, students must have an additional 11 elective credit hours in chemistry. The following courses may **NOT** be used to fulfill this requirement: C100, C101, C102, 103, C107, C118, C121, C122, G201, G207, C240, C243, G307, R340, C372, Y398, G407, G408, C409, G410, C497, C498, G499
Challenge: How Do We Assure That Education Students Have High Quality Field Experiences with Master Teachers?

Percent Completing Field Experiences

- Freshman: 10%
- Sophomore: 60%
- Junior: 100%
- Senior: 100%
Early and Progressive Field Experiences

At the School of Education, we work hard to put students in a classroom with experienced teachers as early as possible in their degree program. Students can start working in schools as early as their second semester. By their junior year, 100% are engaged in field experiences each semester.
Intensive Study-Abroad Teaching Opportunities

As a participant in the award-winning Overseas Cultural Immersions Project, students gain real-world teaching experience in one of 17 partner countries. They return home with a better understanding of their host country and a new perspective on teaching practices in the United States.
Challenge: How Do We Effectively Bring Our Research Expertise to the Nation’s and State’s Schools?
Average of Nearly $15M in Research Awards Per Year

• Computational Textiles ‘BeeSIM’ Project collaborative with MIT and Penn. Supported by NSF, MacArthur and Spencer Foundation grants. Led by IU Professors Kylie Peppler and Joshua Danish

http://www.youtube.com/watch?feature=player_detailpage&v=TJOTuPtvxvE
Research-Based Engagement and Outreach

• Web 2.0 Technology-Supported Problem-Based Learning funded by the U.S. Dept. of Education. Field training of teachers underway in Indiana, including teachers at the Christel DeHaan Academy in Indianapolis. Professors Tom Brush, Krista Glazewski, and Anne Leftwich, Principal Investigators.
Collaborative Engagement and Outreach

• Effective Leaders Academy collaboratively designed and developed with the Kelley School of Business for educational leaders working in schools at risk of failing in Indiana. Professors Gary Crow, Chair of Educational Leadership and Policy Studies, and Timothy Baldwin, Eveleigh Professor of Business Leadership and Professor of Management, Project Coordinators.
Collaborative Teacher and School Leadership Programs

• Joint BS and Master’s of Education in STEM fields
• Kelley Master’s of Strategic Management with Doctorate in Education Leadership
• Peace Corps Partnership for online Master’s in Teaching English as a Foreign Language
Top-Ranked Programs

In 2012, USNWR ranked the School of Education:

• 21st overall nationally
• 11th among public universities
• 7th in curriculum & instruction,
• 8th in elementary education
• 8th in higher education administration
• 10th in counseling and personnel services
• 12th in secondary education
• 14th in school administration
• 21st in educational psychology.
Priorities for the Future

• Recruit more academically talented and diverse students
• Strengthen partnerships with other academic units
• Enhance clinical and field experiences
• Engage with the most challenged schools in Indiana
• Lead in the appropriate use of technology to enhance teaching and learning
School of Education: An Indiana University Point of Pride!