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Status of Credit for Prior Learning (CPL) at the University of Kentucky for 2008 & 2009 Official Cohorts

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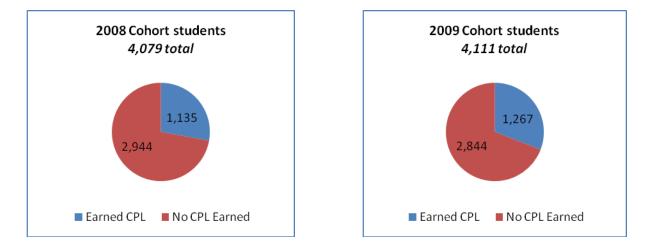
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Status of Credit for Prior Learning (CPL) at the University of Kentucky for 2008 & 2009 Official Cohorts *A report gathered by the Office of Undergraduate Education*

Questions about college readiness status of our students, especially in preparation for success in particular disciplines, have led to further examination of the University's entering cohorts of undergraduate degree-seeking students. Besides the statewide standards using ACT sub-scores in English, Reading and Mathematics, UK takes into account the students' scores from nationally recognized assessments (e.g., Advanced Placement or AP Program examinations) or special departmental examinations conducted locally – see http://www.uky.edu/Registrar/priorlearn.htm.

In particular, the Commonwealth of Kentucky favors the AP as a form of credit for prior learning and has not only a state regulation requiring public postsecondary educational institutions to grant academic college credit toward graduation for students taking high school advanced placement courses and scoring at a certain level (http://www.lrc.state.ky.us/kar/013/002/025.htm), and also supports the Advance Kentucky initiative focusing on broadening access to high quality AP courses and their AP exams (http://www.advancekentucky.com).

A report pulled from SAP by the UK Business Intelligence team in April 2010 gives evidence that there are a significant number of first year students who bring in credit for prior learning (CPL) which in turn affects their placement in their fall semester courses. The amount and type of CPL earned by our entering cohorts for 2008 and 2009 (first time first-year, full-time, degree-seeking) is described below.



Of the 4079 students in the official 2008 cohort, 1135 students (28%) earned credit from their prior learning assessment (CPL) scores. Of the 4111 students in the official 2009 cohort, 1267 students (31%) earned CPL. There were 8,790 instances, i.e., UK-assigned grades of "CR," earned by 2,404 students in 2008 (4,033 CPLs) and 2009 (4,757 CPLs). Over 95% of the credits earned came from successful Advanced Placement exams. The small remainder comes from International Baccalaureate exams and CLEP exams.

The following UK courses in the sciences and math were the most frequently earned by our most recent incoming cohorts.

| TOP MATH AND SCIENCE COURSES WITH CPL | | | | | | |
|---|---------|----------------|----------------|----------------------------|--|--|
| CPL as posted by UK Registrar www.uky.edu/Registrar/priorlearn.htm | Course | 2008 cohort | 2009 cohort | Change in CPL earned | | |
| AP Calc AB or BC 3-5 IB Mathematics HL CLEP Calc 50 or above | MA 113 | 364 | 483 | + | | |
| AP Statistics 3-5 | STA 291 | 153 | 133 | - | | |
| AP Chemistry 3-5 CLEP General Chemistry 50 or above | CHE 105 | 78 | 103 | + | | |
| AP Chemistry 3-5 | CHE 111 | 76 | 103 | + | | |
| AP Chemistry 3-5 CLEP General Chemistry 50 or above | CHE 107 | 76 | 102 | + | | |
| AP Biology 4-5 IB Biology HL | BIO 153 | 86 | 90 | + | | |
| AP Biology 4-5 IB Biology HL CLEP General Biology 65-80 | BIO 152 | 85 | 90 | + | | |
| AP Biology 4-5 IB Biology HL | BIO 151 | 82 | 92 | + | | |
| AP Biology 4-5 IB Biology HL CLEP General Biology 65-80 | BIO 150 | 81 | 92 | + | | |
| AP Calc BC 3-5 IB Mathematics SL Further Math | MA 114 | 60 | 73 | + | | |
| AP Biology 3 IB Biology SL CLEP General Biology 55-64 | BIO 103 | 66 | 62 | - | | |
| AP Biology 3 IB Biology SL CLEP General Biology 60-64 | BIO 102 | 65 | 62 | - | | |
| AP Physics B 3-5 | PHY 151 | 34 | 67 | + | | |
| AP Physics B 3-5 | PHY 152 | 34 | 67 | + | | |
| AP Environmental Sci 3-5 | ENS 200 | 36 | 35 | - | | |
| AP Computer Sci A or AB 3-5 | CS 115 | 28 | 34 | + | | |
| AP Economics (macro) 3-5 | ECO 202 | 17 | 31 | + | | |
| AP Physics C (mechanics) 3-5 | PHY 231 | 15 | 25 | + | | |
| AP Economics (micro) 3-5 | ECO 201 | 13 | 16 | + | | |
| AP Physics C (elec + magnetism) 3-5 | PHY 232 | 4 | 11 | + | | |
| IB Mathematics SL | MA 123 | 4 | 10 | + | | |
| AP Computer Sci AB 3-5 | CS 215 | 2 | 4 | + | | |
| IB Math HL (one year only) | MA 109 | 0 | 6 | + | | |
| IB Physics SL/HL | PHY 211 | 2 | 4 | + | | |
| IB Physics SL/HL | PHY 213 | 2 | 4 | + | | |
| IB Math HL (one year only) | MA 110 | 0 | 2 | + | | |
| AP Chemistry SL | CHE 104 | 0 | 1 | + | | |
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Table 1 TOP MATH AND SCIENCE COURSES WITH CPL

Data gathered from report submitted by Business Intelligence Team from SAP, April 2010

Focusing just on the 2009 official cohort, 701 out of 4,111 students earned credit for prior learning assessments in math and sciences. These CPLs include ENS 200, Environmental Studies - since ENS 200 counts in UK's USP as a natural science. A majority are male (415 or 60%), and a vast majority are white.

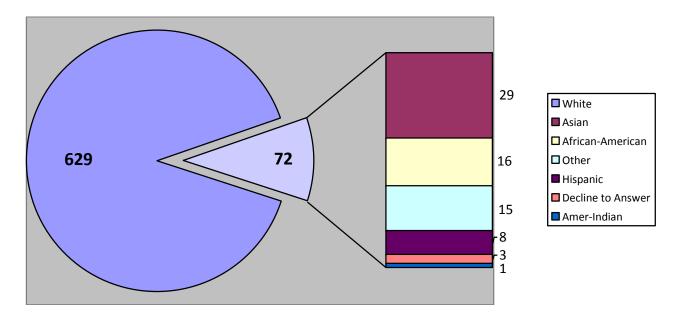


Figure 1: Ethnicity of Students Who Earned Sciences and Math CPL at UK

Nearly all of the students coming to UK with CPL in the sciences and math (602) were offered scholarships. 126 also successfully transferred in college credit hours from an accredited postsecondary institutions.

The vast majority (84%) of incoming students with math and sciences CPLs came with in-state residency status (overall, 78% of the 2009 incoming class came from Kentucky high schools). Yet, those out-of-state students took math and sciences college entrance exams at a higher rate: 591 had in-state residence (averaging 2.52 math/science CPL courses earned) compared to 110 students from out of state (averaging 2.64 math/science CPLs per student).

| College of Agriculture | College of Arts & Sciences | College of Engineering |
|-------------------------------------|---------------------------------|------------------------------------|
| Agricultural Biotechnology | Biology | Chemical Engineering (inc. Pre-) |
| Agriculture - Individualized Curric | Chemistry | Civil Engineering (inc. Pre-) |
| Animal Sciences | Geology | Computer Engineering (inc. Pre-) |
| Biosystems Engineering (inc. Pre-) | Mathematical Economics | Computer Science (inc. Pre-) |
| Food Science | Mathematics | Electrical Engineering (inc. Pre-) |
| Forestry | Physics | Materials Engineering (inc. Pre-) |
| Natural Resource Conservatn & Mgt | | Mechanical Engineering (inc. Pre-) |
| Plant and Soil Science | College of Education | Mining Engineering (inc. Pre-) |
| Pre-Biosystems & Agricultural Engr | Secondary Mathematics Education | |
| | Secondary Science Education | |

University of Kentucky STEM Majors*

*According to the Office of Institutional Research, Equine Science & Management was not counted as a STEM Major in 2009, but will be in 2010.

A majority of the 701 students earning CPL in sciences and math chose STEM majors. These students earned an average of 2.5 sciences and math courses each. Of these students 342 were offered scholarships (86%), and similar to the larger group of students earning science/math CPLs, most came from Kentucky (347 in-state residency) but those who came from out-of-state on the average earned more science/math CPLs (averaging 3.39, compared to an average of 2.92 by in-state students). The students in STEM majors who earned credit for prior assessment scores in the sciences and math - averaging 2.98 CPL courses each - can be found in the following colleges:

| Callana | | | Total # of 2009 cohort with sci/math CPL | |
|------------------------|-------------------------------------|----------|---|--|
| College Majors | | students | | |
| Agriculture | Ag Biotech | 7 | | |
| | Ag General | 1 | 20 | |
| | Animal & Food Sciences | 8 | | |
| | Animal Sciences | 3 | | |
| | Natural Resource Conservation & Mgt | 1 | | |
| Arts & | Biology | 101 | - | |
| Sciences | Chemistry | 33 | | |
| | Geology | 1 | | |
| Mathematical Economics | | 3 | 151 | |
| | Mathematics | 7 | | |
| | Physics | 6 | | |
| Education | Secondary Education - Mathematics | 5 | 5 | |
| Engineering | Civil Engineering | 1 | | |
| | Mechanical Engineering | 1 | | |
| | Pre-Biosystems Engineering | 5 | | |
| | Pre-Chemical Engineering | 44 | | |
| | Pre-Civil Engineering | 33 | | |
| | Pre-Computer Engineering | 21 | 224 | |
| | Pre-Computer Science | 20 | | |
| | Pre-Electrical Engineering | 19 | | |
| | Pre-Materials Engineering | 5 | | |
| | Pre-Mechanical Engineering | 57 | | |
| | Pre-Mining Engineering | 18 | | |

Data gathered from report submitted by Business Intelligence Team from SAP, April 2010

The highest impact from decisions regarding credit for prior learning assessments and correct course placement in the first semester will fall on students in Engineering majors as well as those in biology and chemistry. Incoming students in the remaining STEM majors will be affected; however, there are far fewer with CPLs earned in science and math.

So, what do these students' first semesters look like at UK when they enter with CPLs in math and science? Some individual portraits of those entering the University of Kentucky as a member of our official 2009 cohort include those with double STEM majors from the start, those switching majors and those in academic trouble (placed on probation or suspended). This report indicates the need for a greater understanding of how UK students' credit for prior learning inform academic advising and ultimately impact student success at UK. *NOTE:* The information accessed in order to craft these

portraits came from reports from the Business Intelligence team on scholarships, the students' records in SAP advisor GUI, and from Hobsons Retain communications logs and ACT interest inventory records.

PORTRAIT OF EXEMPLARY TRANSITION FROM HIGH SCHOOL SCIENCES TO UK STEM MAJORS

A white male from Kentucky (Lexington Catholic High School) entered UK as a double major in the College of Arts & Sciences (seeking Bachelor of Sciences in Physics and in Mathematics). His ACT composite score of 35 (English 35, Math 36, Reading 33, Sciences 36) was trumped by a perfect SAT (1600 composite with verbal 800 and math 800). Over the course of his two semesters, he received the following scholarships: External Scholarship, National Merit Scholarship, Patterson Scholarship, Physics & Astronomy Scholarship - earning a total of 266% UK tuition. He brought in all 5s math and sciences AP scores for a total of 34 college credits earned. In his first semester he placed into 200-level math (Calc III) and physics, and has progressed at an exemplary rate so to pre-register for his second year at UK into 400G level math and physics courses. He requested that the Registrar remove his earned credit for the AP Calculus BC and AB sub-score (both 5s), now showing as "exclude earned duplicate credit" on his unofficial UK transcript in SAP, and thus removing 8 college credit hours from his record.¹ His cumulative UK GPA as of the end of his first year is 3.971 (with 83 earned credit hours total).

PORTRAIT OF SUCCESSFUL TRANSITION FROM HIGH SCHOOL MATH TO UK STEM MAJOR

A white male from Kentucky (DuPont Manual Magnet High School) entered UK as a double major in the College of Engineering (seeking a BS in Chemical Engineering) and the College of Arts & Sciences (BS in Economics). His ACT composite of 34 (sub-scores of English 34, Math 34, Reading 31, Sciences 35) was stronger than his SAT composite of 1370 (verbal 650, math 720). Over the course of his two semesters he received the following scholarships: Chemical Engineering, External, Presidential, Valedictorian - earning a total of 185% UK tuition. He brought in 4s and 5s math and sciences AP scores, except for a 3 in AP Physics B) which earned him a total of 38 college credits at UK. He placed into 100-level Engineering and Chemistry classes (retaking CHE107 for which he already had earned credit) and Calculus III (MA213, in which he earned an A). Nevertheless, he requested of the Registrar to "exclude earned duplicate credit" for MA113 and MA114, thus expunging 8 college credit hours from his total earned hours. He is currently pre-registered in 200-level physics, chemistry, engineering and two upper level economics courses (ECO 391 and 402) for his second year at UK. His cumulative UK GPA as of the end of his first year is 4.000 (with 78 earned credit hours total).

PORTRAIT OF SUCCESSFUL TRANSITION FROM HIGH SCHOOL MATH TO UK STEM MAJOR

An African-American female from Kentucky (Hardin Central High School) entered UK's College of Engineering as a Pre-Civil Engineering major. Her ACT scores (composite 26 with English 26, Math 27, Reading 25, Sciences 26) were better than her earlier SAT scores (composite 1130 with verbal 520 and math 610). She brought in a 5 on the AP Calculus AB test along with a 3 on the AP Chemistry test, thus bringing in a total of 11 credit hours from prior assessed learning, and UK offered her 223% tuition with a William C. Parker scholarship. Her responses to the R&SS Conversational Survey did not indicate any risk for attrition (she indicated she was somewhat stressed about family or community obligations) and saw Lexington as larger than her home town. She earned an UK Calculus Placement Test score of 90 and enrolled in Engineering Calculus (EGR 199) where she earned an A - overall UKGPA 3.786 in her first

¹ Of the 8,790 total CPLs earned by the 2009 cohort, 47 credits have this "excluded" demarcation. This occurs retroactively upon student request. The Registrar's Office informed us that students are told that UK-earned course credit is better than AP credit when applying to professional programs. The following are the CPLs excluded: BIO 102, BIO 103, MA 113, ENG 101, ENG 104, ENG 161, HIS 104, HIS 105, HIS 108, HIS 109, PSY 100, STA 291, SPA 210, and PHY 151.

semester and Dean's List. She improved in her second semester (enrolled in Calc II) to end her first year with cumulative GPA of 3.867, and is pre-registered in Calculus III for this coming fall. She is supported by AMSTEMM and CARES staff in addition to her Engineering academic advisor.

PORTRAIT OF UNSUCCESSFUL TRANSITION FROM HIGH SCHOOL MATH TO UK STEM MAJORS

A white female from out of state who entered UK seeking a biology major in the College of Arts & Sciences switched to another STEM major in another college (BA in Education, Science Education) by September 24th in her first semester. Though her SAT math sub-score placed her in the Academic Readiness Program, she never responded to repeated requests to complete the University Placement Test; and, her responses to the Retention & Student Success Conversational Survey (submitted on Aug. 28, 2009) showed some risk for attrition, i.e., admitted to being somewhat stressed about obligations back home, sometimes turned in homework late in high school, Lexington seeming larger than her hometown and UK was not her first choice. She earned a 45 on the UK Calculus Placement Test and placed into MA109 even though she had received the (now no longer accepted) CPL for her high school IB score in math. She submitted no other prior learning assessment scores to UK for evaluation. She earned As in MA109 and ENG104 at midterm -- but even before midterm, she dropped to part-time status. She received one academic alert early in the semester from her CHE105 instructor, received another at midterm for her D in CHE111, but did not respond to repeated requests for meetings from her advisor or the Director for R&SS, and did not priority register for Spring 2010. Her cumulative UK GPA is 2.375 (with 11 earned hours).

PORTRAIT OF UNSUCCESSFUL TRANSITION FROM HIGH SCHOOL SCIENCES TO UK STEM MAJOR

A multi-racial male from Kentucky (Reidland High School) entered UK seeking a BS in Animal Sciences from the College of Agriculture. He earned 74% tuition scholarship in fall, then as he dropped down to part-time in the spring, he earned only 54% tuition. He had filled out the ACT interest inventory in high school (where he identified himself as "multiracial" - he indicated "other" ethnicity on the UK admissions); he wanted to go to school in Kentucky and chose veterinary medicine as a vocational choice (very sure); and, he wanted help with studying and with writing courses (not math or education planning). He also indicated that UK was his #3 college choice. When he responded to the R&SS Conversational Survey in August 2009, he changed his mind and said that UK was his first choice. The rest of his survey showed few indicators of risk for attrition (he said he planned to go home infrequently, Lexington was smaller than his hometown, planned to work on campus, and only sometimes turned in high school homework late). He transferred in 9 credit hours from Murray State University (COM 161 and ENG 101, 102). He also submitted four AP test scores for evaluation (a 5 in Biology, a 4 in Chemistry, a 3 in English Lit and a 1 in Calculus AB) - which totaled 20 college credits in Biology, Chemistry and English. It is not currently known if he participated in the CARES Freshman Summer Program, however, he is identified in SAP as affiliated with this support unit. Despite not having a Calculus Placement Score recorded in SAP and an AP score of 1, he enrolled in MA113 in his first semester at UK. He received academic alerts in Calculus (poor homework) and ended up with a D in MA113 and P in MA193 (supplementary workshop) by the end of term. Combined with his E in ASC101 (Domestic Animal Biology) and W in GEN100, his B in Marching Band and A in Beginning Japanese, he was placed on probation. The spring semester brought Es in all his classes (JPN102, CLA135 and CHE113) except Concert Band in which he earned an A. He is eligible for suspension, but remains on probation with A&S and is pre-registered for this coming fall semester in linguistics-related courses.