Taskforce for Underprepared Students: Fact-Finding Visits.

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"Cast down your buckets where you are." These are perhaps the most famous words ever spoken by Booker T. Washington, the great African-American writer and educator. Washington's words were rightly controversial because he was telling African-Americans to postpone efforts to achieve full civil and political rights. As Washington saw it, the immediate challenge facing African-Americans concerned the here and now, the poverty facing African-Americans living in the south in 1895. This poverty, he believed, could only be alleviated by building vibrant economic and educational institutions in the communities where African-Americans lived right then.

Now, what does any of this have to do with remedial/developmental education at Honolulu Community College?

Simply put, students across the country routinely graduate with high school degrees while so profoundly lacking that their deficiencies may condemn them to live as essentially second-class citizens. And they know this, which is an additional sorrow for them to bear. This trend threatens our state and country's economic future, and if it isn't reversed, millions of Americans will live at subsistence levels comparable to developing countries. For many Americans, this is already the case.

When this taskforce was originally proposed at a special FSEC session, one FSEC representative suggested that the growing numbers of underprepared students seemed a matter for the DOE. This thinking isn't uncommon, although the remark made me cringe, imagining HCC Faculty lecturing besieged DOE teachers about why they need to teach better. Obviously,
better communication should exist between local high schools and community colleges on matters such as curriculum, skill sets, and expectations. And I believe that such positive communication is already underway.

However, better communication alone can’t solve this nationwide crisis. The sheer numbers of severely underprepared high school graduates leave us no time for blaming each other or blaming administrators past and present. Nor can we look back wistfully to the days when our students were better prepared and genuinely motivated. Neither are we allowed the luxury of blaming society and inevitably surrendering to resentment and despair.

It’s time for us to cast down our buckets. After all, these are the students who come to us. Yes, many of them don’t have the skills and knowledge we’d like. Like all of us, they desire more meaningful lives for themselves and their families. So they come to us. Many come after a lifetime of struggling in school, and being told that they’re “slow,” or told to go find jobs suitable for people like them—jobs that in today’s economy don’t pay enough to experience any genuine level of comfort or simple peace of mind.

I admire their courage, frankly. Yet we—the state, the UH system, and Honolulu Community College—are failing them. We have to serve them better. It’s as simple as that.

There is no more important issue facing our college, state, and country.

(Oh, and incidentally, the term “remedial education” seems out of favor at least where I visited. Saying “remedial education” earned me a verbal wrist slap each time I said it. Durham Tech, for example, uses developmental education to describe educational coursework below transfer-level general education courses. For this report, I’ll do the same.)

For this brief fact-finding tour, I visited two Community Colleges—Cleveland State (Tennessee) and Durham Tech (North Carolina). I also visited the National Center for Developmental Education located on the campus of Appalachian State University in Boone,
North Carolina. In my narrative, I'll cover them chronologically, so Cleveland State Community College (CSCC) is first up.

**Cleveland State Community College: The Math Emporium Model**

According to Kevin Carey, writing for the *Chronicle of Higher Education*:

remediation is the no man's land of American education. Every year we send hundreds of thousands of young men and women over the top, across a rocky landscape strewn with pedagogical barbed wire and the remains of those who tried and failed before them... Thankfully, some people are doing exactly that, today. And you'll often find them in places like Cleveland State—not the university in Ohio, but the community college in Cleveland, Tenn., about 30 miles northeast of Chattanooga...Cleveland State Community College is a typical American institution of higher education. Meaning: (a) It's publicly supported and struggles to raise money; (b) admissions standards aren't stringent; (c) most students come from local high schools; and (d) many students don't arrive prepared for college-level work. To improve their success rates with developmental math, John Squires, then chair of CSCC's math department, installed the "math emporium" model developed at Virginia Tech and promoted by the National Center for Academic Transformation (see appendix for articles about the math emporium model and institutions who use it).

To illustrate CSCC's success with underprepared students in math as well as reading and writing, I asked Steven Shigemoto to make this chart comparing developmental success rates and where HCC and CSCC rank nationally by percentile:

**ENG 20BCDE and MATH 20BCD ONLY**

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- **Enrollee Success Rate** = Number successfully completing course / Number Enrolled (Total Enrollment Including "W" Grades)
- **Completer Success Rate** = Number successfully completing course / Number Retained (Total Enrollment Excluding "W" Grades)
MATH 20 completions were calculated in the same way as ENG 20 completions.

On Monday, Oct 19 at 9am, I met with Karen Wyrick, Assistant Professor of Mathematics, and co-author of *Do the Math*, their self-generated teaching software accompanying Pearson’s *MyMath Labs*. It was only 50 degrees that morning. This is relevant because the Cleveland State campus had turned off the heat to save money during fall break. Karen, the staff, and the students wore their coats indoors. I asked Karen—she insisted I call her Karen—whether the success of Cleveland State’s Math Redesign could be attributed to area high schools providing CSCC with superior students. Karen told me that Tennessee Public Schools ranked #44 in the nation in math and weren’t much better in writing or reading. She found it extraordinary to think that there could be many community colleges anywhere with students more significantly underprepared than many who attend CSCC.

The following is my interview with Karen Wyrick. Her answers are in bold and chiefly concern their Math Redesign curriculum.

1. Do you have a mandatory placement test?
   Yes.
2. If so, what specific placement test does your college use to place students in remedial/developmental courses?
   ACT or Compass.
3. Does the college provide students an opportunity to prep for the placement test?
   No.
4. Do they offer an online tutorial or a refresher course before students take the placement/entrance exam?
   No.
5. Do you offer mandatory post-placement test advising?
   No.
6. For students who are required to take remedial/developmental courses in math and English, are the students prevented from registering for other coursework (for example, the coursework in their degree program) until they finish their remedial/developmental courses?
   Yes. We have online blocks, prerequisites. I believe we’re in the process of re-imposing some prerequisites that we’d removed.
1. How is your remedial/developmental curriculum taught?

All developmental math courses are taught using Do the Math/MyMath Labs.

2. Do you use a traditional lecture format?

No.

3. If so, are the remedial/developmental courses modular?

They're all modular on the computer.

4. In addition to classroom lecture—There is no classroom lecture—are there lab/individual study sessions required?

All students are required to spend 1 hour per week in our computer lab. They check in using the bar codes on their student IDs. Instructors receive regular reports concerning their students' attendance at lab.

5. How much homework is given?

Students are expected to complete at least one module per week.

6. Learning Modes—estimate percentages used during typical semester:

   Instructor Lectures/Demonstrations _____%
   Supervised Small Group Activities _____%
   Supervised Pair Activities _____%
   Supervised Individual Activities _____%
   Non-supervised Individual Activities _____%

   All instruction is computer-based with fifteen-minute lectures beginning a module, and then private assistance when a student has questions provided by a full-time faculty member or professional tutor.

7. Total number of hours per week required for students to be physically present?

A student spends one hour in class and one hour in lab, so total is 2.

8. Does your remedial/developmental curriculum separate the reading and writing components for English?

Yes, but Fred Wood, Dean of Humanities and Social Sciences will answer your questions about developmental reading and writing.

9. Are students in remedial/developmental courses provided direct assistance in connecting with student support services such as financial aid, registration, outreach services, peer mentoring, an Early Alert System, and supplemental instruction?

Karen's answers led me to believe that CSCC didn't place as much emphasis on support-services for developmental students as other campuses. Although by reading their catalog, I did see that these services were available, which makes me wonder about the coordination of these services.

10. Is your remedial/developmental curriculum part of your English and math departments or are they part of a Learning Center?

Developmental math is part of our transfer-level math department.

11. In other words, are developmental instructional faculty primarily evaluated by other instructional faculty?

Yes.

12. Or are they evaluated by librarians and media specialists?

No.

13. Does everybody in English and math teach remedial courses?

Yes.
20. Do your remedial/developmental courses have stated “mandatory drop” policies? In other words, do you automatically remove students from the class registration list if students DO NOT meet certain requirements by a certain date in the semester? 
No, but students must have at least 70% attendance/participation to pass developmental math classes.

21. Do you have any data that would support whether this policy has made a positive (or negative) impact on your students?

Retention increased. Success rate increased. Numbers of Math students increased.

22. Do specific grading options have a significant impact on the success of under-prepared students: Pass/Fail, Credit/No Credit, Letter Grades, or something else? What specific impacts, if any, do grading options have regarding the retention and success of under-prepared students?

I'm not sure.

23. How many different degrees does your institution offer? (A.A., A.S. A.A.S.)

All three.

24. What levels of Math and English are required for your Trade/Technical programs? Do you feel that your Trade/Technical programs are mostly consistent in terms of specific math and English requirements? Do you think requiring college levels of English and math for ALL degree programs motivates underprepared students to take remedial/developmental classes more seriously?

Absolutely, yes!

25. Would you be willing to share syllabi for your first year transfer English and Math and also your first year remedial English and Math? Would remedial/developmental SLOs also be available?

See appendix.

26. How do you ensure that when students complete your institutions remedial/developmental curricular sequence that these students are adequately prepared for the collegiate sequence in math and English?

According to our Office of Institutional Research and Effectiveness, DSP math students have out-performed others in college-level math.

27. What is your transfer level math course for your institution?


28. What is your transfer level English course for your institution?

English 1110.

29. How are tutors utilized? Do you rely mostly on professional and student tutors? Do you have online tutoring?

We have 6 professional lab tutors, and the Math lab is open 52 hrs per week.

30. How do you deal with students so severely underprepared, for example, that they don't know their multiplication tables?

Developmental Math 700 deals with whole numbers.

31. If a student places into both remedial math and English, is it mandatory for that student to enroll in learning skills courses to help them develop success skills like time management, note taking, test taking skills, etc.?

If they test into two of the three developmental areas, reading, writing, and math, y must enroll immediately in a semester long class in learning strategies.
32. Are certain groups of underprepared students required to meet with counselors and academic advisors to develop an education plan?

No.

33. How do you collect data on persistence, retention, and attrition on remedial/developmental programs?

Office of Institutional Research and Effectiveness.

34. Can you share this data?

Yes.

35. Are students taught in a traditional classroom—20 pupils or so? If so, how many students?

Sometimes more, sometimes less.

36. How many instructors for each group? Other instructional personnel?

How many days/hours per week does the class meet?

1 hour a week with professor, 1 hour in computer lab with a goal of one module per week, so the students often spend more time in the lab than required.

37. How many semesters of instruction before mainstreaming?

Student must complete full developmental curriculum sequence.

38. Is remuneration available for instructional personnel (5 hours in room with students = 5 hours salary)? Professional background of instructional staff?

Tutors work 15-20 hours per week and earn around 15 or so dollars per hour.

39. Are there generation 1.5 students in this group of students? Do you treat them any differently from the others? Successes working with this group? Failures?

She was unfamiliar with the term.

40. How much homework is required for each class meeting?

Not applicable.

41. What are your methods of assessment as well as exit criteria?

70% on ALL quizzes and exit exams for modules.

Would you be willing to provide a complete list of all materials used? Include texts, Internet sites, software, etc. (See appendix)

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<td>20</td>
<td>60</td>
<td>3</td>
</tr>
<tr>
<td>850</td>
<td>900</td>
<td>3</td>
<td>9</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>13</td>
<td>13</td>
<td>48</td>
<td>3.692</td>
</tr>
<tr>
<td>TOTAL</td>
<td>181</td>
<td>149</td>
<td>4</td>
<td>0</td>
<td>112</td>
<td>57</td>
<td>503</td>
<td>446</td>
<td>1179</td>
<td>84.77</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Before walking me to their main computer lab, Karen Wyrick told me that the success of CSCC's Developmental Math Redesign had improved the entire college's retention success by 7%.

It was the first day of fall break for Tennessee's public higher education system. However, in the main lab, which had about 60 computers, around 15 to 20 students were working on their individual classes, and assisted by three tutors. Many students seemed to be working on Math 700, the most basic course in their developmental sequence. Other students were working on transferable math courses such as statistics and pre-calculus. Nearly all of CSCC's total math courses use the math emporium model. I spent close to an hour sitting and talking with the students. The higher-level students really liked CSCC's method for using Do the Math/My Math Labs, particularly praising the kindness and effectiveness of the professional...
tutors. (again, the students and tutors were wearing their coats since the outside temperature was in the forties, and the college had turned off the heat because of budgeting issues.)

Anyway, the higher-level students were using fall break to get ahead in their classes. One student planning to transfer to Tennessee-Chattanooga in spring 2010 to major in education told me that she liked CSCC’s *Do the Math/My Math Labs* because she “wanted to get her math out of the way so she wouldn’t have to think about it again.” According to her rate of completing modules, she believed she’d be finished by Thanksgiving. A Latina student working on Math 700, CSCC’s lowest developmental course, told me that she actually liked learning through the traditional lecture method and that she missed the 3 days a week in the classroom. Looking over her shoulder, however, I saw that the particular module she was working on had her ahead of the recommended/required one module at her work. In fact, she was scheduled to finish Math 700 a full two weeks before the semester’s end. Presuming she finished early, Karen said the student could immediately start work on Math 800, if she wanted.

Finally, I saw two non-traditional female students working on Basic Math 700. They were in their fifties, possibly early sixties, and seemed good friends in that they were helping each other. They both loved CSCC’s *Do the Math/My Math Labs*, for allowing them to work independently of the traditional classroom where they felt uncomfortable among students so much younger. One of the women told me that she’d been in real estate for years until the recent crash. Ultimately, she had to find work as a custodian in a local hospital, which inspired her to get a degree in nursing. She dreaded returning to school, particularly having to take math classes.

“Honey,” she said, “I graduated high school in 1973. I could be the mother of some of these students, maybe even their grandmother, God forbid.”
Both women were grateful for CSCC’s *Do the Math/My Math Labs* for allowing them not to feel embarrassed by holding up an entire class with their questions because the instructor was going too fast and making them feel “stupid.”

After my time with Karen Wyrick, I spent a half hour or so with Fred Wood, CSCC’s Dean of Humanities and Social Sciences. Our time was limited because of an impending meeting for Dean Wood. Regarding their developmental reading and writing program, CSCC has 3 full-time instructors exclusively teaching developmental writing, and 1 full-time instructor in developmental reading. CSCC’s developmental reading and writing are taught using a combination of traditional classroom lecture and lab work overseen by instructional faculty, not student tutors.

They also have comprehensive learning strategies classes that are taught mostly by adjunct lecturers. On the Compass test, if a student tests into two of the areas: reading, writing, and math, then that student must enroll in a learning strategies class.

Dean Wood said that CSCC relies more on online blocks on registration (prerequisites) than they do on advising. Dean Wood believes rigorous and strict enforcement of blocks and prerequisites is necessary to place students in the proper curricular sequence in order to avoid setting them up for failure.

Dean Wood believes that developmental students, especially students who test into developmental reading and/or writing, shouldn’t be allowed to enroll in transfer-level courses. Moreover, he feels extremely uncomfortable allowing particularly low-scoring students on Compass to enroll in any coursework even non-transfer occupation-oriented courses. Dean Wood concedes the possibilities of some students who test into transfer levels of reading and writing, although not math, could succeed in some transfer-level courses. However, Dean Wood
recommends there be strict oversight, i.e., computerized Banner registration to prevent any accidental enrollments by students who don't have the necessary skills.

Banner tracks developmental students as they move from basic (lowest levels of scores in reading and writing on Compass) to developmental and into transfer-level writing courses. They have a success rate of around 60%.

Finally, Dean Wood told me that CSCC's developmental reading and writing programs were soon to undergo a redesign somewhat similar to CSCC's developmental math, making more use of computers, although not exclusively as with developmental math. He didn't know anymore of the specifics concerning the developmental reading and developmental writing redesign.

I found Cleveland State's and its use of the Math Emporium model to be genuinely inspiring. Unfortunately, because of fall break, I would've liked to talk to more students in order to gauge their enthusiasm against those working hard on the first day of fall break.

The following pages contain information and data for Cleveland State's developmental education program.
Cleveland State Community College
Developmental Studies

The following courses may be required of students based upon assessment results. Students may also be required to take one or more of the courses based upon referral from the instructor. None of the courses will satisfy requirements for degrees or certificates. (Prerequisite: Placement testing or completion of previous course, if any, in applicable sequence.)

Developmental Mathematics courses DSPM 0700, DSPM 0800 and DSPM 0850 are taught in a 1+2 format, with students meeting in class one hour each week and working in the Math Lab two hours each week outside of class. These courses require the student to have a graphing calculator. Students should refer to the course syllabus to determine the recommended calculator for these courses.

- **DSPM 0700 - Basic Mathematics**
  DSPM 0700 - Basic Mathematics
  3 credits

  Whole numbers, fractions, decimals, integers, ratio and proportion, percents, averages, exponents and roots, graphs, equations, applications. Graphing calculator required – see course syllabus for details Three hours per week F, S

- **DSPM 0800 - Elementary Algebra**
  DSPM 0800 - Elementary Algebra
  3 credits

  Operation with real numbers, evaluating formulas, absolute value, order of operations, distributing and combining like terms, solving linear equations and inequalities, solving formulas, graphing lines and functions, finding equations of lines, finding slope and intercepts of lines, domain and range, vertical line test, algebra of functions, variation, solving systems of equations by graphing and substitution; matrices and determinants, Cramer’s rule, finding breakeven points and equilibrium points. Three hours per week F, S

- **DSPM 0850 - Intermediate Algebra**
  3 credits

  Polynomial operations, rules of exponents; negative exponents, scientific notation, factoring polynomials, solving equations by factoring, solving equations by graphing, rational expressions, radical expressions, quadratic functions, solving quadratic equations, completing the square, square root property, quadratic formula, graphing parabolas, finding intercepts, finding maxima and minima, solving
business applications. Graphing calculator required – see course syllabus for details
Three hours per week F, S

DSPR 0700 - Basic Reading
3 credits
Sight, analytical and contextual vocabulary; literal and critical comprehension;
dictionary usage. Three hours per week. F, S

DSPR 0800 - Developmental Reading
3 credits
Studies in literal and critical comprehension, vocabulary and logical thinking
designed to enhance the student's level of reading ability. Course seeks to unify all
reading skills with skill application to content area reading and serves as a bridge to
Level I work. Three hours per week. F, S

DSPS 0800 - Learning Strategies
3 credits
This is a general information preparation course. It is intended to provide the
student an opportunity to further develop academic skills, life management skills,
etc. and to become familiar with Cleveland State's campus and resources. Three
hours per week. F, S

DSPW 0700 - Basic Writing
3 credits
Standard sentence structures, grammar and mechanical correctness and
appropriate usage in the context of the paragraph and short essay. Lecture with lab
referrals based upon instructor discretion. Three hours per week. F, S

DSPW 0800 - Developmental Writing
3 credits
Grammar and mechanical correctness, standard sentence structures, topic
development, organizational skills, paragraph and essay development, vocabulary
selection, sentence variety and revision skills. Three hours per week. F, S
CSCC Math Redesign Report

Spring Semester 2009

2008 – 2009AY Developmental Math (DSPM) Totals

<table>
<thead>
<tr>
<th></th>
<th>Previous AYs</th>
<th>2008-2009 AY</th>
<th>% Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students Passing DSPM Course</td>
<td>657 (of 1234) or 54%</td>
<td>845 (of 1201) or 70%</td>
<td>29% (188/657)</td>
</tr>
<tr>
<td>Students Exiting DSPM</td>
<td>330 (of 595) or 55%</td>
<td>436 (of 591) or 74%</td>
<td>32% (106/330)</td>
</tr>
</tbody>
</table>

Comments: These statistics are the true measure of the success of the redesign project. A 29% increase in the number of students passing a DSPM course, combined with a 32% increase in the number of students exiting the developmental math program, is exactly the sort of improvement the redesign was aiming for. Mobility within developmental math was also a goal of the redesign project. Fifty students completed two or more developmental math courses in one semester. Thirteen students completed Intermediate Algebra and a college level math class in the same semester. Two students completed three courses in one semester. Clearly, the ability of the students to move quickly through the developmental math program has been achieved.

Basic Math

<table>
<thead>
<tr>
<th></th>
<th>Previous Years</th>
<th>Fall 2008</th>
<th>Spring 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completion Rate (ABC/ABCDFW)</td>
<td>52%</td>
<td>65%</td>
<td>50%</td>
</tr>
<tr>
<td>Passing Rate (ABC/ABCDF)</td>
<td>62%</td>
<td>71%</td>
<td>58%</td>
</tr>
<tr>
<td>Course GPA</td>
<td>1.92</td>
<td>2.53</td>
<td>2.00</td>
</tr>
<tr>
<td>Performance on Common Test Items</td>
<td>73.3</td>
<td>86.2</td>
<td>84.8</td>
</tr>
</tbody>
</table>

Comments: After experiencing improvement in the success rate in Fall 2008, Basic Math reverted to its historically high failure rates in Spring 2009. Problems still exist in the course, as students get stuck in modules 1 – 5 and get frustrated and quit. The course will be tweaked in the future in an attempt to address these problems.

Elementary Algebra

<table>
<thead>
<tr>
<th></th>
<th>Previous Years</th>
<th>Spring 2008</th>
<th>Fall 2008</th>
<th>Spring 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completion Rate (ABC/ABCDFW)</td>
<td>52%</td>
<td>70%</td>
<td>67%</td>
<td>70%</td>
</tr>
<tr>
<td>Passing Rate (ABC/ABCDF)</td>
<td>63%</td>
<td>80%</td>
<td>74%</td>
<td>80%</td>
</tr>
<tr>
<td>Course GPA</td>
<td>1.95</td>
<td>2.88</td>
<td>2.63</td>
<td>2.82</td>
</tr>
<tr>
<td>Performance on Common Test Items</td>
<td>70.3</td>
<td>86.2</td>
<td>83.8</td>
<td>84.1</td>
</tr>
</tbody>
</table>

Comments: The improvement in success rates, course GPA, and student learning have been sustained over all three semesters of the redesign. Students are doing much better as a result of the new structure of this course.
Intermediate Algebra

<table>
<thead>
<tr>
<th></th>
<th>Previous 5 Years</th>
<th>Spring 2008</th>
<th>Fall 2008</th>
<th>Spring 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completion Rate (ABC/ABCDFW)</td>
<td>56%</td>
<td>71%</td>
<td>79%</td>
<td>67%</td>
</tr>
<tr>
<td>Passing Rate (ABC/ABCDF)</td>
<td>67%</td>
<td>80%</td>
<td>87%</td>
<td>74%</td>
</tr>
<tr>
<td>Course GPA</td>
<td>2.02</td>
<td>2.85</td>
<td>3.20</td>
<td>2.61</td>
</tr>
<tr>
<td>Performance on Common Test Items</td>
<td>77.3</td>
<td>90.1</td>
<td>88.7</td>
<td>87.6</td>
</tr>
</tbody>
</table>

Comments: The improvement in success rates, course GPA, and student learning have been sustained over all three semesters of the redesign. Students are doing much better as a result of the new structure of this course.

Developmental Math Students in MATH Courses

<table>
<thead>
<tr>
<th></th>
<th>Completion Rate</th>
<th>Passing Rate</th>
<th>Course GPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before Redesign</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DSPM Students in MATH</td>
<td>71%</td>
<td>87%</td>
<td>2.41</td>
</tr>
<tr>
<td>After Redesign</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DSPM Students in MATH</td>
<td>76%</td>
<td>85%</td>
<td>2.89</td>
</tr>
</tbody>
</table>

Comments: This is one of the most important measures of success for any developmental math program. Given the higher success rates in the developmental math program under redesign, one might expect students to do worse in college level math courses, but just the opposite is true. The redesign appears to be doing a better job of preparing students for college level courses. The reasons can be traced to the amount of work the students are doing under the redesign and the mastery learning approach in which students must master all of the concepts in the developmental math program. Students are better prepared for college as a result of the redesign project.

MATH Totals

<table>
<thead>
<tr>
<th></th>
<th>Previous AYs</th>
<th>2008-2009 AY</th>
<th>% Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students Passing College Algebra, Finite Math, Stats</td>
<td>490/681 = 72%</td>
<td>650/863 = 75%</td>
<td>160/490 = 33%</td>
</tr>
</tbody>
</table>

Comments: Enrollment in college level math courses increased by 42% in Spring 2009 over previous spring semesters. The reason for this increase is simple – students exiting developmental math increased by 47% in Fall 2008, so more students were eligible to take a college level math course. It should be noted that college retention increased by 7% in Spring 2009, and much of this can be directly attributed to the increased success rates of the developmental math program. With a 33% increase in students passing a college level math course in the 2008 – 2009 AY, the long term impact on the college’s retention and graduation rates are obvious. The success of the redesign project cannot be overstated. Students did better in both developmental math and college level math, benefiting both the students in those courses and the college as a whole.
**College Algebra**

<table>
<thead>
<tr>
<th>Completion Rate (ABCD/ABCDFW)</th>
<th>Previous 5 Years</th>
<th>Fall 2008</th>
<th>Spring 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>65%</td>
<td></td>
<td>74%</td>
<td>79%</td>
</tr>
<tr>
<td>Passing Rate (ABCD/ABCD)</td>
<td>82%</td>
<td>82%</td>
<td>85%</td>
</tr>
<tr>
<td>Course GPA</td>
<td>2.26</td>
<td>2.89</td>
<td>3.07</td>
</tr>
<tr>
<td>Performance on Common Test Items</td>
<td>75.64</td>
<td>86.34</td>
<td>86.5</td>
</tr>
</tbody>
</table>

Comments: The course redesign of college algebra resulted in improvements in both success rates and student learning. This improvement was sustained during both semesters of the redesign, which is promising.

**Introductory Statistics**

<table>
<thead>
<tr>
<th>Completion Rate (ABCD/ABCDFW)</th>
<th>Previous 5 Years</th>
<th>Fall 2008</th>
<th>Spring 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>79%</td>
<td></td>
<td>68%</td>
<td>76%</td>
</tr>
<tr>
<td>Passing Rate (ABCD/ABCD)</td>
<td>89%</td>
<td>84%</td>
<td>84%</td>
</tr>
<tr>
<td>Course GPA</td>
<td>2.79</td>
<td>3.04</td>
<td>2.91</td>
</tr>
<tr>
<td>Performance on Common Test Items</td>
<td>79.6</td>
<td>83.3</td>
<td>82.75</td>
</tr>
</tbody>
</table>

Comments: After addressing the problems in modules 3 and 5, the student success rate rebounded to a level comparable to the rate before redesign. None of the differences in student learning or success rates before redesign and after redesign are statistically significant. However, it is the consensus of the faculty that this course has been strengthened in content as a result of the redesign, so continued high success rates are encouraging.

**Finite Math**

<table>
<thead>
<tr>
<th>Completion Rate (ABCD/ABCDFW)</th>
<th>Previous 5 Years</th>
<th>Fall 2008</th>
<th>Spring 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>75%</td>
<td></td>
<td>91%</td>
<td>64%</td>
</tr>
<tr>
<td>Passing Rate (ABCD/ABCD)</td>
<td>87%</td>
<td>97%</td>
<td>88%</td>
</tr>
<tr>
<td>Course GPA</td>
<td>2.53</td>
<td>3.63</td>
<td>3.38</td>
</tr>
<tr>
<td>Performance on Common Test Items</td>
<td>82.1</td>
<td>87.5</td>
<td>90.2</td>
</tr>
</tbody>
</table>

Comments: Finite math is a low enrollment course – there were only 11 students in the course during Spring 2009. Success rates of low enrollment courses can fluctuate wildly, as one or two students dropping the course can greatly impact the course statistics. None of the improvements (or drops) are statistically significant. The course appears to be acceptable in both content and level of difficulty to both students and faculty.
Overview of the Project

Student Engagement

The students spent approximately 19,000 hours in the Cleveland and Athens math labs. The students also spent approximately 15,000 hours working in the classroom and logged thousands of additional hours at home. Students in the redesigned courses had to work harder than ever in order to be successful. It should be noted that students have become very accustomed to the redesign. They are completely on task in both the classroom and the math lab, focused on getting their work done in the math courses.

Lab Staffing

The staffing of the Cleveland lab with five tutors and faculty members worked well. Also, one volunteer worked in the lab five to six hours each week. Ways to gain additional volunteers from the community and a local four-year college are being explored. The math lab has been added to the community service opportunities list at a local university. Also, working in the math lab is an option for students in service learning courses at Cleveland State. The department is optimistic the volunteer portion of the lab staff will expand slightly in future years. The staffing of the Athens lab was sufficient.

Faculty Productivity

Faculty productivity rose by 23% in the 2008 – 2009 AY. The average student load per faculty member went from 106 to 130 and the FTE teaching load per faculty member went from 21.2 to 26.0. However, it should be stated that expecting faculty members to move beyond this range would be unreasonable. There is a limit to how many students a faculty member can manage and still give students the individual attention that they need to be successful. We are definitely approaching that limit. Going forward, faculty members should expect to teach 10 - 11 sections, work 8 – 10 hours in the lab, and handle 150+ students.

Enrollment Strategies

The continuous enrollment approach of the math department is clearly a success, with students able to complete two courses in one semester or complete one course and start in the next course. Many students have taken advantage of this option, as evidenced by 63 students completing multiple courses.

The one room schoolhouse, where students from multiple courses meet in the same classroom at the same time, has been implemented successfully. This strategy has lead to an atmosphere of “math on demand”, where students can get their program needs met better than ever before. Students in Athens and Vonore will be able to take courses that have never been offered at those campuses starting in 2009.

Reducing Costs

The increased faculty productivity has enabled to department to eliminate the use of adjunct faculty members at the same time that course offerings are actually increased. Other savings include less copying due to online homework and testing. Overloads have also been reduced as a result of the redesign project. All of this has resulted in annual savings of over $50000 as of fall 2009, which is a significant savings for a department of eight faculty members and one staff member.

Summary

The primary goals of the program were to increase success rates in the developmental math program, better prepare these students for success in college, and increase the ability of students to move quickly through the developmental math program, removing the roadblocks to success. All of this was to be done with an eye towards producing actual cost savings. So far, the project has to be deemed a big success.
On Wednesday, Oct 21, at 10am, I met with Dr. Hunter Boylan. Here is Dr. Hunter Boylan’s bio from achievingthedream.org:

“Hunter Boylan is the Director of the National Center for Developmental Education and a Professor of Higher Education at Appalachian State University. He is the Past President of the National Association for Developmental Education and the current Chairperson of the American Council of Developmental Education Associations. Hunter founded both the Kellogg Institute for the Training and Certification of Developmental Educators and Research in Developmental Education and directed the nation’s first doctoral program in developmental education at Grambling State University. He serves as the principle investigator for the ongoing National Study of Developmental Education and serves on the editorial boards of the Journal of Developmental Education, the International Journal of Education and Development, and the Journal of Teaching and Learning. He is the author of three books, ninety articles, and over one hundred and twenty regional, national, and international conference presentations.”

The following is my interview with Dr. Hunter Boylan. His answers are in bold.

1. Should you have a mandatory placement test?  
   Yes.
2. If so, what specific placement test do you recommend to place students in remedial/developmental courses?  
   Compass or Accu-placer.
3. Should the college provide students an opportunity to prep for the placement test? Yes, research shows this can improve a student’s score from 8 to 15%.
4. Should the college offer an online tutorial or a refresher course before students take the placement/entrance exam?  
   I recommend that pre-test preparation be conducted face to face.
5. Should you offer mandatory post-placement test advising?  
   Yes, a student support person or academic counselor specifically assigned for developmental students should gather personal information such as work hours per week, single parent, whatever obstacle may possibly prevent the student from achieving success. This is absolutely vital for students who have really low scores on placement tests.
6. For students who are required to take remedial/developmental courses in math and English, should the students be prevented from registering for other coursework (for example, the coursework in their degree program) until they finish their remedial/developmental courses?  
   Depends on where a student tests and what is the course.
7. How should a remedial/developmental curriculum be taught? Should you use a traditional lecture format? If so, are the remedial/developmental courses modular? Developmental students need both.
8. In addition to classroom lecture and study, should there be lab/individual study sessions required? Again, developmental students need both.
9. Should homework be given? Yes.
10. Learning Modes—estimate percentage used during typical semester:
    Dr. Boylan was reluctant to give out specific percentages...since these obviously could vary by institution. However, he said that he couldn't emphasize enough the need for active learning and rigorous classroom assessment.
    a. Instructor Lectures/Demonstrations ___________ %
    b. Supervised Small Group Activities ___________ %
    These should be genuinely hands on and supervised by faculty or professional instructors, not student tutors.
    c. Supervised Pair Activities ___________ %
    These should be genuinely hands on and supervised by faculty or professional instructors, not student tutors.
    d. Supervised Individual Activities ___________ %
    e. Non-supervised Individual Activities ___________ %
    f. Total number of hours per week required for students to be physically present?
11. In a remedial/developmental curriculum, should you separate the reading and writing components for English? Now, they could write about what they may be reading in a reading class, but, yes, you have to have separate reading and writing components.
12. Should students in remedial/developmental courses be provided with direct assistance in connecting with student support services such as financial aid, registration, outreach services, peer mentoring, an Early Alert System, and supplemental instruction? Yes, Yes, and Yes. Developmental students need these services the most and use them the least. You have to have people to lead them by the hand. Also, being able to culturally connect with developmental students is key.
13. Do you recommend that remedial/developmental curriculum be part of your English and math departments or are they part of a Learning Center? Both models can be effective. But if one model isn't working, then don't be afraid to switch to the other.
14. Do you recommend that developmental instructional faculty be evaluated by other instructional faculty? Yes.
    Or by librarians and media specialists? No.
15. Should everybody in English and math teach remedial courses? Yes.
16. Do you recommend that remedial/developmental courses have stated "mandatory drop" policies? In other words, should you automatically remove students from the class
registration list if students DO NOT meet certain requirements by a certain date in the 
semester?
Yes, I recommend that, but what happens to them afterwards is important. They 
should be counseled and, if possible, be placed perhaps in a lower-level 
developmental course.

17. Do you have any data that would support whether this policy makes a positive (or 
negative) impact on students?
Anecdotal evidence suggests that it helps.

18. Do specific grading options have a significant impact on the success of under-prepared 
students: Pass/Fail, Credit/No Credit, Letter Grades, or something else? No.
19. What specific impacts, if any, do grading options have regarding the retention and 
success of under-prepared students?
No response.

20. How many different degrees does your institution offer? (A.A., A.S. A.A.S.)
Not applicable.

21. What levels of Math and English are required for your Trade/Technical programs?
Not applicable.

22. Do you feel that your Trade/Technical programs are mostly consistent in terms of 
specific math and English requirements? Do you think requiring college levels of English 
and math for ALL degree programs motivates underprepared students to take 
remedial/developmental classes more seriously?
Although I haven’t seen any data, I guess that it does.

23. Would you be willing to share syllabi for your first year transfer English and Math and 
also your first year remedial English and Math? Would remedial/developmental SLOs 
also be available?

See Appendix.

24. How do you ensure that when students complete your institutions 
remedial/developmental curricular sequence that these students are adequately prepared 
for the transfer sequence in math and English?
You have to have specific exit criteria that is rigorous and strictly enforced.

25. What is your transfer level math course for your institution?
Not applicable.

26. What is your transfer level English course for your institution?
Not applicable.

27. How should tutors be utilized? Should you rely mostly on professional and student 
tutors?
Professional tutors.

28. Do you recommend online tutoring?
I’ve seen no evidence that it works.

29. How should you deal with students so severely underprepared, for example, that they 
don’t know their multiplication tables?
Explore Adult Basic Education, if your state has a successful program. Many states 
don’t.
30. If a student places into both remedial math and English, should it be mandatory for that student to enroll in learning skills courses to help them develop success skills like time management, note taking, test taking skills, etc.?
Absolutely. But the material in the learning skills courses must relate directly to their developmental coursework. Otherwise, it doesn’t work.

31. Should certain groups of underprepared students be required to meet with counselors and academic advisors to develop an education plan?
Yes, and these plans must be monitored by student support-services to insure that the student is following their plan.

32. How do you recommend collecting data on persistence, retention, and attrition for remedial/developmental programs?
Do it. Just do it. Hopefully, your computerized enrollment management system could provide whatever data you need.

33. Should students be taught in a traditional classroom—20 pupils or so?
Yes, but it depends the quality of instruction going on in the classroom.
   a. If so, how many students?
      20.
   b. How many instructors for each group?
      Hard to say.
   c. Other instructional personnel?
      Yes, if you can, do so.
   d. How many days/hours per week does the class meet? How many semesters of instruction before mainstreaming?
      When the student has the skills to be successful.

34. Is renumeration available for instructional personnel (5 hours in room with students = 5 hours salary?) Professional background of instructional staff?
By all means, pay them.

35. Are there generation 1.5 students in this group of students? Do you treat them any differently from the others? Successes working with this group? Failures?
HB had no idea what this meant.

36. How much homework is required for each class meeting?
Not applicable.

37. What should be methods of assessment as well as exit criteria?
Standardized exit tests shouldn’t be ruled out. You could even use Compass as an exit exam.

38. Would you be willing to provide a complete list of all materials used? Include texts, Internet sites, software, etc.
See appendix.

After our interview, Dr. Boylan wanted to add a few points. He recommends that any community college’s developmental education program should have at least 2 semesters of developmental reading. He also said that educators often easily “underestimate the impact of
the language we use. ‘You should’ve learned that in elementary school or whatever.’

Such language can have devastating effects on underprepared students.” Dr. Boylan also wondered in light of Honolulu Community College’s strikingly poor success rates, whether it’s ethical to enforce mandatory placement when the odds are so strong that they’ll fail.

Later that day, I met with Dr. Barbara Bonham, who serves as Senior Researcher for the National Center for Developmental Education. Here is her bio from the NCDE’s website:

"Dr. Bonham serves as Senior Researcher for the National Center for Developmental Education and a faculty member for the Kellogg Institute. Barbara has taught twelve years in the field of developmental education at Bloomsburg University as a math instructor, lab coordinator, tutorial supervisor, and assistant to the Director in a Student Services Program (TRIO). She has over 30 years teaching experience....She has served as consultant to numerous two-year and four-year colleges in the area of developmental education particularly mathematics as well as a program reviewer and evaluator for Title III, Title V, FIPSE, and Achieving the Dream projects."

Although Dr. Bonham’s answers were quite similar to Dr. Boylan’s, she provided a valuable perspective to several questions. For example,

Question #8 about connecting students with direct assistance to support services, Dr. Bonham said,

“Clearly yes. Comprehensive student support services are incredibly important, and if possible these should be in close proximity to where the students are being taught. On the same floor if possible.”

Question #10 about “mandatory drop policies” if students haven’t met specific requirements by a specific date, Dr. Bonham said, “Yes. Denver CC allows five absences and then you’re out. Also, Denver requires that students attend the first week or they’re dropped.”

Question #18 concerning the use of tutors, Dr. Bonham recommends professional tutors, but as far as student tutors, “It depends on the quality of their training and the consistency of their
oversight.” Dr. Bonham also strongly recommends that online tutoring be used as a “supplement,” but she advises strongly against the use of workbooks.

Question #22 about collecting data on persistence, retention, and attrition for remedial/developmental programs, Dr. Bonham recommends looking at their website: http://www.ncde.appstate.edu/

Question #13 about requiring college levels of English and math motivating under-prepared students to take developmental classes more seriously, Dr. Bonham said, “My gut-level feeling is yes, but the North Carolina State Legislature mandates that no college degrees be awarded unless a student completes all necessary developmental coursework.”

Furthermore, Dr. Bonham recommends a single coordinator for developmental education—a dean or director—and not distributing the complexities of managing support services, coordinating tutoring services and educational technology, and the assessment and evaluation of personnel among assorted department chairs.

The following chart on nationwide developmental retention rates was compiled by the National Center for Developmental Education.
National Study of Developmental Education II: Baseline Data for Community Colleges
By Katherine Gerlaugh, Lizette Thompson, Hunter Boylan, and Hildreth Davis

Table 3
Institutions Using Retention and Pass Rates
In Content Areas for Evaluation Purposes

<table>
<thead>
<tr>
<th>Subject Area</th>
<th>Developmental Course</th>
<th>Next Level Course</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pass Rate</td>
<td>Retention Rate</td>
</tr>
<tr>
<td>Reading</td>
<td>82.8%</td>
<td>79.3%</td>
</tr>
<tr>
<td>Writing</td>
<td>90.0%</td>
<td>86.7%</td>
</tr>
<tr>
<td>Math</td>
<td>89.7%</td>
<td>93.1%</td>
</tr>
</tbody>
</table>
Durham Tech Community College

When I'd finished talking to Dr. Hunter Boylan, I asked him what he could tell me about the success of Durham Tech, since that was my next destination. Dr. Boylan praised Durham Tech's developmental student support services, saying they were "a national model."

The NCDE praised Durham Tech for having among the best developmental student support services in the country.

On Thursday, Oct. 22, at 9a.m., I met with Dr. Christine Kelly-Kleese, Dean and Department Head, Student Engagement and Transitions. Obviously, the name Durham brings to mind Duke University, and perhaps North Carolina's well-known Research Triangle named for the 4 prestigious universities within an hour's drive from one another: UNC-Chapel Hill, North Carolina State, Wake Forest, and, of course, Duke University.

However, the city of Durham is an entirely different story from the internationally recognized Research Triangle. Durham has perhaps the largest at-risk population than any urban area in North Carolina. Durham Tech's students, by and large, don't end up at one of the 4 universities listed above. To assume Durham Tech's success rates are the result of students coming from superior feeder high schools, Dr. Kelly-Kleese says that every year, somewhere between 40 to 50 students come to Durham Tech with high-school diplomas in hand, yet test so low on Compass in the area of reading that Durham Tech requires that they then take the Test on Adult Basic Skills (TABE). The TABE results reveal that these 40-50 high school graduates have a reading level below the 4th grade.

The following is my interview with Dr. Christine Kelly-Kleese. Her answers are in bold. My comments are italicized.
1. Do you have a mandatory placement test?
   Yes.

2. If so, what specific placement test does your college use to place students in remedial/developmental courses?
   Compass

3. Does the college provide students an opportunity to prep for the placement test?
   Yes. **We require students to attend compass prep workshops.**

4. Do they offer an online tutorial or a refresher course before students take the placement/entrance exam?
   **We have online tutorials available**

5. Do you offer mandatory post-placement test advising?
   No.

6. For students who are required to take remedial/developmental courses in math and English, are the students prevented from registering for other coursework (for example, the coursework in their degree program) until they finish their remedial/developmental courses?
   Yes.

7. How is your remedial/developmental curriculum taught?
   4 credit hours and 5 contact hours

8. Do you use a traditional lecture format?
   Some classes are lecture format. Some are combination lecture with lab work with the instructor overseeing the students in the lab.

9. If so, are the remedial/developmental courses modular?
   **Well, we have a 16 week semester and offer 8 week intensive courses for students who are able to speed up the developmental education sequence.**

10. In addition to classroom lecture—are there lab/individual study sessions required?
    **Sometimes**

11. How much homework is given?
    **Significant.**

12. Learning Modes—estimate percentages used during typical semester:
    Instructor Lectures/Demonstrations _____%
    Supervised Small Group Activities _____%
    Supervised Pair Activities _____%
    Supervised Individual Activities _____%
    Non-supervised Individual Activities _____%

    **Dr. Kelly-Kleese felt these varied so much depending on class and instructor that it was impossible for her to give percentages; however, when it comes to all supervised activities, instructors or professional tutors do the supervision.**

13. Total number of hours per week required for students to be physically present?
    **All courses at Durham Tech require 90% attendance. Instructors are expected to keep and track attendance (absences and tardies) for each student throughout the semester. Instructors have to submit attendance records at semester's end.**

14. Does your remedial/developmental curriculum separate the reading and writing components for English?
At first, Dr. Kelly-Kleese didn't understand the question until I explained that HCC doesn't have a formal reading curriculum. **Well, you have to teach reading.**

15. Are students in remedial/developmental courses provided direct assistance in connecting with student support services such as financial aid, registration, outreach services, peer mentoring, an Early Alert System, and supplemental instruction?

Dr. Hunter Boyland of the NCDE praised Durham Tech for having perhaps the best developmental student support services in the country. Their support services are detailed in the inserts following the section on Durham Tech as well as the appendix.

16. Is your remedial/developmental curriculum part of your English and math departments or are they part of a Learning Center?

**We have a comprehensive program that includes our Developmental Education, but also our Center for Academic Excellence, First-Year Experience, and Gateway to College. All of these come under Student Engagement and Transitions.**

16. In other words, are developmental instructional faculty primarily evaluated by other instructional faculty?

**Other faculty and administration in Student Engagement and Transitions.**

18. Or are they evaluated by librarians and media specialists?

**No.**

19. Does everybody in English and math teach remedial courses?

**No.**

20. Do your remedial/developmental courses have stated "mandatory drop" policies? In other words, do you automatically remove students from the class registration list if students DO NOT meet certain requirements by a certain date in the semester?

**If students miss 15% of classes consecutively, the students must be dropped, which is North Carolina law.**

21. Do you have any data that would support whether this policy has made a positive (or negative) impact on your students?

**It's hard to tell since it's the law.**

22. Do specific grading options have a significant impact on the success of underprepared students: Pass/Fail, Credit/No Credit, Letter Grades, or something else? What specific impacts, if any, do grading options have regarding the retention and success of underprepared students?

**Letter Grades. (I'll talk more about the letter grades and Durham Tech's developmental students in my conclusion)**

23. How many different degrees does your institution offer? (A.A., A.S., A.A.S.)

**All three.**

24. What levels of Math and English are required for your Trade/Technical programs?

**Transfer-level.**

Do you feel that your Trade/Technical programs are mostly consistent in terms of specific math and English requirements?

**Yes.**

Do you think requiring college levels of English and math for ALL degree programs motivates underprepared students to take remedial/developmental classes more seriously?

**Yes.**
25. Would you be willing to share syllabi for your first year transfer English and Math and also your first year remedial English and Math? Would remedial/developmental SLOs also be available? *(see appendix)*

26. How do you ensure that when students complete your developmental curricular sequence that these students are adequately prepared for the collegiate sequence in math and English?
   **Gather data regularly and watch it closely.**

27. What is your transfer level math course for your institution?
   **Math 101 and others.**

28. What is your transfer level English course for your institution?
   **English 111.**

29. How are tutors utilized? Do you rely mostly on professional and student tutors? Do you have online tutoring?
   **We have 25 professional tutors, earning between 14-16 dollars per hour, and working anywhere from 5-28 hours per week. We have online tutoring, but it’s not being used.**

30. How do you deal with students so severely underprepared, for example, that they don’t know their multiplication tables?
   **All the time in MAT 50.**

31. If a student places into both remedial math and English, is it mandatory for that student to enroll in learning skills courses to help them develop success skills like time management, note taking, test taking skills, etc.?
   **Yes.**

32. Are certain groups of underprepared students required to meet with counselors and academic advisors to develop an education plan?
   **Yes.**

33. How do you collect data on persistence, retention, and attrition on your developmental programs?
   **We have five full-time employees whose job is to gather data on student success and can access assorted reports from my computer.**

34. Can you share this data?
   **Yes. I think some is even published on website.**

35. Are students taught in a traditional classroom—20 pupils or so?
   **Yes.**

36. How many instructors for each group? How many days/hours per week does the class meet? How many semesters of instruction before mainstreaming?
   **Developmental classes total 80 contact hours. 95% of them meet 2 or 3 days a week. Developmental writing classes are taught in computer labs. Developmental reading classes aren’t held in a computer lab. Developmental math classes will continue to be lecture format. Math lab will supplement and be required for struggling students and repeaters.**

38. Is remuneration available for instructional personnel (5 hours in room with students = 5 hours salary?) Professional background of instructional staff?
Pay covered in question #29. All professional tutors have master’s degrees.

39. Are there generation 1.5 students in this group of students? Do you treat them any differently from the others? Successes working with this group? Failures?

Unfamiliar with term.

40. How much homework is required for each class meeting?

Again, significant.

41. What are your methods of assessment as well as exit criteria?

Internally-generated Departmental Diagnostic Exams.

Internally-generated Departmental Midterm-Progress Reports.

Internally-generated Departmental Finals

42. Would you be willing to provide a complete list of all materials used? Include texts, Internet sites, software, etc.

(see appendix)

I found my interview with Dr. Kelly-Kleece rather inspiring. Durham Tech manifests a level of caring for their developmental students that amazed me. Dr. Kelly-Kleece told me that she wants everyone working for Durham Tech’s developmental education program to have the goal of “wrapping their arms around these students.” In other words, the social justice of their mission means keeping these students from disappearing, stopping the cycle of academic defeat and workplace despair. She gave me two examples detailed in the paragraphs below.

The State of North Carolina mandates a 75% success rate for all developmental courses at institutions receiving public funding. Candidly, Dr. Kelly-Kleece said that Durham Tech only reached 74%. She attributes missing their goal of 75% to their singular policy of requiring students in the lowest levels of the developmental curriculum earn an A or B to pass; a C doesn’t cut it. Durham Tech’s reason for this is “to rewrite the history of non-performing students,” to get them genuine experiences with academic success.

Periodically, Dr. Kelly-Kleece meets with developmental students to get their feedback on the quality of instruction and support services. At a meeting a few years ago, a few students thought that the name of their tutoring center, The Learning Skills and Strategies Center, made
the students feel dumb. Dr. Kelly-Kleese charged the students with renaming the tutoring center. It is now called *The Center for Academic Excellence*.

The following information is a thorough overview of Durham Tech’s developmental education program and their comprehensive student-support services.
Durham Technical Community College
Beginning June 1, 2009

COMPASS Scores/Course Placement

___ WRITING SKILLS

<table>
<thead>
<tr>
<th>Score Range</th>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 14</td>
<td>ENG 070</td>
</tr>
<tr>
<td>15 - 38</td>
<td>ENG 080</td>
</tr>
<tr>
<td>39 - 69</td>
<td>ENG 090/090A</td>
</tr>
<tr>
<td>70 - 99</td>
<td>ENG 111</td>
</tr>
</tbody>
</table>

___ MATHEMATICS (Pre-Algebra)

<table>
<thead>
<tr>
<th>Score Range</th>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 26</td>
<td>MAT 050</td>
</tr>
<tr>
<td>27 - 46</td>
<td>MAT 060</td>
</tr>
<tr>
<td>47 - 99</td>
<td>MAT 070 or any course with MAT 060 pre-req</td>
</tr>
</tbody>
</table>

___ READING SKILLS

<table>
<thead>
<tr>
<th>Score Range</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 33</td>
<td>Referral to R. Muckenfuss</td>
</tr>
<tr>
<td>34 - 52</td>
<td>RED 070</td>
</tr>
<tr>
<td>53 - 69</td>
<td>RED 080</td>
</tr>
<tr>
<td>70 - 80</td>
<td>RED 090</td>
</tr>
<tr>
<td>81 - 100</td>
<td>No Reading needed</td>
</tr>
</tbody>
</table>

___ ALGEBRA

<table>
<thead>
<tr>
<th>Score Range</th>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 38</td>
<td>MAT 070</td>
</tr>
<tr>
<td>39 - 65</td>
<td>MAT 080 or any course with MAT 070 pre-req</td>
</tr>
<tr>
<td>66 - 99</td>
<td>MAT 171 or any course with MAT 080 pre-req</td>
</tr>
</tbody>
</table>

SAT and ACT Scores/Course Placement

OLD SAT Scores: 500+ Verbal = ENG 111
NEW SAT Scores: 500+ Writing AND Critical Reading = ENG 111
ACT Scores: 20+ English = ENG 111; 20+ Mathematics = College-level math

<table>
<thead>
<tr>
<th>Minimum SAT Math Score</th>
<th>Mathematics Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>400</td>
<td>MAT 090, MAT 101</td>
</tr>
<tr>
<td>450</td>
<td>MAT 080, MAT 110, MAT 115, MAT 121, MAT 140/140A</td>
</tr>
<tr>
<td>500</td>
<td>MAT 151, MAT 161/161A, MAT 171/171A</td>
</tr>
<tr>
<td>Subject Test Level I Score</td>
<td>MAT 172/172A, MAT 263/263A</td>
</tr>
<tr>
<td>540</td>
<td>MAT 271</td>
</tr>
<tr>
<td>620</td>
<td>MAT 271</td>
</tr>
<tr>
<td>Subject Test Level II Score</td>
<td>MAT 172/172A, MAT 263/263A</td>
</tr>
<tr>
<td>480</td>
<td>MAT 271</td>
</tr>
<tr>
<td>550</td>
<td>MAT 271</td>
</tr>
</tbody>
</table>

Students whose SAT scores are not at the prescribed level, or whose scores are more than five years old, will be required to take the COMPASS or ASSET test for mathematics placement.
Initial student placement in developmental courses is based on the college's placement testing policies and procedures. Students should begin developmental course work at the appropriate level indicated by the college's placement test.

**RED 070 Essential Reading Skills**

This course is designed to strengthen reading skills. Emphasis is on basic word attack skills, vocabulary, transitional words, paragraph organization, basic comprehension skills, and learning strategies. Upon completion, students should be able to demonstrate competence in the skills required for RED 080. Emphasis is also on demonstrating successful academic skills and using current materials such as a newspaper. This course does not satisfy the developmental reading prerequisite for ENG 111 or ENG 111A.

Course Hours Per Week: Class, 3; Lab, 2
Semester Hours Credit: 4
Prerequisite: None
Corequisite: None

**RED 070 Course Outline**

**RED 080 Introduction to College Reading**

This course introduces effective reading and inferential thinking skills in preparation for RED 090. Emphasis is on vocabulary, comprehension, and reading strategies. Upon completion, students should be able to determine main ideas and supporting details, recognize basic patterns of organization, draw conclusions, and understand vocabulary in context. Emphasis is also on demonstrating successful academic behaviors and using diverse materials such as periodicals. This course does not satisfy the developmental reading prerequisite for ENG 111 or ENG 111A.

Course Hours Per Week: Class, 3; Lab, 2
Semester Hours Credit: 4
Prerequisite: RED 070 or satisfactory score on placement test
Corequisite: None

**RED 080 Course Outline**
RED 090  Improved College Reading

This course is designed to improve reading and critical thinking skills. Topics include vocabulary enhancement; extracting implied meaning; analyzing author's purpose, tone, and style; and drawing conclusions and responding to written material. Upon completion, students should be able to comprehend and analyze college-level reading material. Some sections may specialize in discipline-specific reading and academic success skills. This course satisfies the developmental reading prerequisite for ENG 111 or ENG 111A.

Course Hours Per Week: Class, 3; Lab, 2
Semester Hours Credit: 4
Prerequisite: RED 080 or ENG 085
Corequisite: None
RED 090 Course Outline

RED 090  Improved College Reading (MED)

This course is designed to improve reading and critical thinking skills. Topics include vocabulary enhancement; extracting implied meaning; analyzing author's purpose, tone, and style; and drawing conclusions and responding to written material. Upon completion, students should be able to comprehend and analyze college-level reading material. Some sections may specialize in discipline-specific reading and academic success skills. This course satisfies the developmental reading prerequisite for ENG 111 or ENG 111A.

Course Hours Per Week: Class, 3; Lab, 2
Semester Hours Credit: 4
Prerequisite: RED 080 or satisfactory score on placement test
Corequisite: None
RED 090 (MED) Course Outline

Return to Course Descriptions
Return to Class Schedules
Return to Programs of Study
Initial student placement in developmental courses is based on individual college placement testing policies and procedures. Students should begin developmental course work at the appropriate level indicated by the college's placement test.

ENG 070 Basic Language Skills

This course introduces the fundamentals of standard written English. Emphasis is on effective word choice, recognition of sentences and sentence parts, and basic usage. Upon completion, students should be able to generate sentences that clearly express ideas. Students compose sentences in standard written English using all verb tenses and correct punctuation.

Course Hours Per Week: Class, 2; Lab, 2
Semester Hours Credit: 3
Prerequisite: None
Corequisite: None

ENG 070 Course Outline

ENG 080 Writing Foundations

This course introduces the writing process and stresses effective sentences. Emphasis is on applying the conventions of written English as well as reflecting standard usage and mechanics in structuring a variety of sentences. Upon completion, students should be able to write correct sentences and a unified, coherent paragraph. Students are introduced to the standard essay form. This course does not satisfy the developmental reading and writing prerequisite for ENG 111.

Course Hours Per Week: Class, 3; Lab, 2
Semester Hours Credit: 4
Prerequisite: ENG 070
Corequisite: None

ENG 080 Course Outline
ENG 090  Composition Strategies

This course provides practice in the writing process and stresses effective paragraphs. Emphasis is on learning and applying the conventions of standard written English in developing paragraphs within the essay. Upon completion, students should be able to compose a variety of paragraphs and a unified, coherent essay. Students write essays responding to assigned readings and using different rhetorical modes. This course satisfies the developmental writing prerequisite for ENG 111.

Course Hours Per Week: Class, 3; Lab, 0

Semester Hours Credit: 3

Prerequisite: RED 070 and ENG 080

Corequisite: ENG 090A

ENG 090 Course Outline

ENG 090A Composition Strategies Lab

This writing lab is designed for practicing the skills introduced in ENG 090. Emphasis is on learning and applying the conventions of standard written English in developing paragraphs within the essay. Upon completion, students should be able to compose a variety of paragraphs and a unified, coherent essay.

Course Hours Per Week: Class, 0; Lab, 2

Semester Hours Credit: 1

Prerequisite: ENG 080

Corequisite: ENG 090

ENG 090A Course Outline

ENG 095 Reading and Composition Strategies

This course uses whole language to strengthen proficiency in reading and writing for college. Emphasis is on applying critical reading skills to narrative and expository texts and on using the writing process. Upon completion, students should be able to comprehend, analyze, and evaluate college texts and to compose essays in preparation for college writing. Some sections may be discipline specific. This course integrates ENG 090 and RED 090. This course satisfies the developmental reading and writing prerequisites for ENG 111.

Course Hours Per Week: Class, 5; Lab, 0

Semester Hours Credit: 5

Prerequisites: ENG 080 and RED 080

Corequisite: ENG 095A

ENG 095 Course Outline

ENG 095A Reading and Composition Strategies Lab

This laboratory provides the opportunity to practice the skills introduced in ENG 095. Emphasis is on applying critical reading skills to narrative and expository texts and on the writing process. Upon completion, students should be able to apply those skills in producing effective essays as preparation for
college writing.

Course Hours Per Week: Class, 0; Lab, 2

Semester Hours Credit: 1

Prerequisites: ENG 080 and RED 080

Corequisite: ENG 095

ENG 095A Course Outline

ENG 111 Expository Writing

This is the required first course in a series of two designed to develop the ability to produce clear expository prose. Emphasis is on the writing process, including audience analysis, topic selection, thesis support and development, editing, and revision. Upon completion, students should be able to produce unified, coherent, well-developed essays using standard written English. Students should also be able to respond critically to readings and demonstrate an understanding of the fundamentals of research and documentation. This course has been approved to satisfy the Comprehensive Articulation Agreement for the general education core requirement in English composition.

Course Hours Per Week: Class, 3; Lab, 0

Semester Hours Credit: 3

Prerequisites: ENG 090 and RED 090, or ENG 095 or satisfactory score on placement test

Corequisite: None

ENG 111 Course Outline

ENG 112 Argument-Based Research

This is the second required English composition course for technical/vocational programs. This course introduces research techniques, documentation styles, and argumentative strategies. Emphasis is on analyzing data and incorporating research findings into documented argumentative essays and research projects. Upon completion, students should be able to summarize, paraphrase, interpret, and synthesize information from primary and secondary sources using standard research format and style. Students should also be able to present material orally in a clear and logical format. This course has been approved to satisfy the Comprehensive Articulation Agreement for the general education core requirement in English composition.

Course Hours Per Week: Class, 3; Lab, 0

Semester Hours Credit: 3

Prerequisite: ENG 111

Corequisite: None

ENG 112 Course Outline

ENG 113 Literature-Based Research

This is the second required English composition course for university transfer programs. This course expands the concepts developed in ENG 111 by focusing on writing that involves literature-based research and documentation. Emphasis is on critical reading and thinking as well as the analysis and
Mathematics Course Descriptions

Initial student placement in developmental courses is based on individual college placement testing policies and procedures. Students should begin developmental course work at the appropriate level indicated by the college's placement test.

MAT 050  Basic Math Skills

This course is designed to strengthen basic math skills. Topics include properties, rounding, estimating, comparing, converting, and computing whole numbers, fractions, and decimals. Upon completion, students should be able to perform basic computations and solve relevant mathematical problems. A discussion of ratios, rates, proportions, and applications of these topics will be included.

Course Hours Per Week: Class, 3; Lab, 2
Semester Hours Credit: 4
Prerequisite: None
Corequisite: None
MAT 050 Course Outline

MAT 060  Essential Mathematics

This course is a comprehensive study of mathematical skills which should provide a strong mathematical foundation to pursue further study. Topics include principles and applications of decimals, fractions, percents, ratio and proportion, order of operations, geometry, measurement, and elements of algebra and statistics. Upon completion, students should be able to perform basic computations and solve relevant, multi-step mathematical problems using technology where appropriate.

Course Hours Per Week: Class, 3; Lab, 2
Semester Hours Credit: 4
Prerequisite: MAT 050 or satisfactory score on placement test
Corequisite: RED 080
MAT 060 Course Outline

MAT 070  Introductory Algebra

This course establishes a foundation in algebraic concepts and problem solving. Topics include signed numbers, exponents, order of operations, simplifying expressions, solving linear equations and inequalities.
graphing, formulas, polynomials, factoring, and elements of geometry. Upon completion, students should be able to apply the concepts learned in problem solving using appropriate technology. Solving quadratic equations by factoring is also included.

Course Hours Per Week: Class, 3; Lab, 2
Semester Hours Credit: 4
Prerequisite: MAT 060 or satisfactory score on placement test
Corequisite: RED 080

MAT 070 Course Outline

MAT 080 Intermediate Algebra

This course continues the study of algebraic concepts with emphasis on applications. Topics include factoring; rational expressions; rational exponents; rational, radical, and quadratic equations; systems of equations; inequalities; graphing; functions; variations; complex numbers; and elements of geometry. Upon completion, students should be able to apply the concepts learned in problem solving using appropriate technology.

Course Hours Per Week: Class, 3; Lab, 2
Semester Hours Credit: 4
Prerequisite: MAT 070 or satisfactory score on placement test
Corequisite: RED 080

MAT 080 Course Outline

MAT 090 Accelerated Algebra

This course covers algebraic concepts with emphasis on applications. Topics include those covered in MAT 070 and MAT 080. Upon completion, students should be able to apply algebraic concepts in problem solving using appropriate technology.

Course Hours Per Week: Class, 3; Lab, 2
Semester Hours Credit: 4
Prerequisite: MAT 060 or satisfactory score on placement test and permission from the instructor or math discipline chair.
Corequisite: RED 080

MAT 090 Course Outline

MAT 101 Applied Mathematics I

This course is a comprehensive review of arithmetic with basic algebra designed to meet the needs of certificate and diploma programs. Topics include arithmetic and geometric skills used in measurement, ratio and proportion, exponents and roots, applications of percent, linear equations, formulas, and statistics. Upon completion, students should be able to solve practical problems in their specific areas of study. Also included are definitions and properties of angles, polygons, and circles; area; and right triangle trigonometry. This course is intended for certificate and diploma programs.

Course Hours Per Week: Class, 2; Lab, 2
MAT 110 Mathematical Measurement

This course provides an activity-based approach to utilizing, interpreting, and communicating data in a variety of measurement systems. Topics include accuracy, precision, conversion, and estimation within metric, apothecary, and avoirdupois systems; ratio and proportion; measures of central tendency and dispersion; and charting of data. Upon completion, students should be able to apply proper techniques to gathering, recording, manipulating, analyzing, and communicating data.

Course Hours Per Week: Class, 2; Lab, 2

Semester Hours Credit: 3
Prerequisite: MAT 070
Corequisite: None

MAT 110 Course Outline

MAT 115 Mathematical Models

This course develops the ability to utilize mathematical skills and technology to solve problems at a level found in non-mathematics-intensive programs. Topics include applications to percent, ratio and proportion, formulas, statistics, functional notation, linear functions and their graphs, probability, sampling techniques, scatter plots, and modeling. Upon completion, students should be able to solve practical problems; reason and communicate with mathematics; and work confidently, collaboratively, and independently. Applications may be drawn from the fields of business, public services, and various technologies.

Course Hours Per Week: Class, 2; Lab, 2

Semester Hours Credit: 3
Prerequisite: MAT 070 or satisfactory score on placement test
Corequisite: None.

MAT 115 Course Outline

MAT 121 Algebra/Trigonometry I

This course provides an integrated approach to technology and the skills required to manipulate, display, and interpret mathematical functions and formulas used in problem solving. Topics include simplification, evaluation, and solving of algebraic and radical functions; complex numbers; right triangle trigonometry; systems of equations; and the use of technology. Upon completion, students should be able to demonstrate an understanding of the use of mathematics and technology to solve problems as well as analyze and communicate results. A basic introduction to statistics is also included.

Course Hours Per Week: Class, 2; Lab, 2

Semester Hours Credit: 3
2008-2009 PROFILE

Enrollment by Headcount (Unduplicated)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Curriculum Programs (Credit)</td>
<td>7,662</td>
<td>7,774</td>
<td>8,030</td>
</tr>
<tr>
<td>Continuing Education</td>
<td>18,360</td>
<td>18,363</td>
<td>18,408</td>
</tr>
<tr>
<td>Basic Skills*</td>
<td>(4,749)</td>
<td>(4,758)</td>
<td>(4,973)</td>
</tr>
<tr>
<td>Overall Unduplicated Headcount**</td>
<td>25,444</td>
<td>25,509</td>
<td>25,810</td>
</tr>
</tbody>
</table>

* Basic Skills totals are also included in Continuing Education enrollment totals.
** Curriculum and Continuing Education subtotals will not equal total enrollment.

Source: Annual Statistical Report, NCCCS

Enrollment by FTE

<table>
<thead>
<tr>
<th></th>
<th>Summer 2008</th>
<th>Fall 2008</th>
<th>Spring 2009</th>
<th>Total FTE</th>
<th>Budget FTE*</th>
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</thead>
<tbody>
<tr>
<td>Curriculum Programs</td>
<td>497</td>
<td>1,688</td>
<td>1,780</td>
<td>3,965</td>
<td>3,468</td>
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<tr>
<td>Continuing Education</td>
<td>341</td>
<td>578</td>
<td>546</td>
<td>1,465</td>
<td>1,361</td>
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<tr>
<td>Basic Skills</td>
<td>(84)</td>
<td>(177)</td>
<td>(187)</td>
<td>(468)</td>
<td>(448)</td>
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<tr>
<td>FTE Totals</td>
<td>838</td>
<td>2,266</td>
<td>2,326</td>
<td>5,430</td>
<td>4,829</td>
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</table>

* Budget FTE does not include FTE from the Curriculum Summer term or all Continuing Education programs.

Source: Annual Statistical Report, NCCCS

Curriculum Student Residence

<table>
<thead>
<tr>
<th>Durham County</th>
<th>Orange County</th>
<th>Outside Service Area</th>
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</thead>
<tbody>
<tr>
<td>57%</td>
<td>16%</td>
<td>27%</td>
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Curriculum Student Profile

<table>
<thead>
<tr>
<th>Males</th>
<th>Females</th>
<th>American Indian</th>
<th>Asian/Pacific Islander</th>
<th>Black, Non-Hispanic</th>
<th>Hispanic</th>
<th>Other/Unknown/Multiple</th>
<th>White, Non-Hispanic</th>
</tr>
</thead>
<tbody>
<tr>
<td>37%</td>
<td>63%</td>
<td>&lt;1%</td>
<td>5%</td>
<td>43%</td>
<td>5%</td>
<td>10%</td>
<td>37%</td>
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</table>

The average age of Fall 2009 Curriculum students is 32.

GRADUATES

<table>
<thead>
<tr>
<th>Curriculum Programs*</th>
<th>Continuing Education</th>
<th>Adult High School and GED</th>
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</thead>
<tbody>
<tr>
<td>Associate</td>
<td>274</td>
<td>Fire Protection Academy: 7</td>
</tr>
<tr>
<td>Certificate</td>
<td>358</td>
<td>BioPharma/Biowork: 91</td>
</tr>
<tr>
<td>Diploma</td>
<td>109</td>
<td>Emergency Medical Services: 306</td>
</tr>
<tr>
<td>Total</td>
<td>741</td>
<td>Nursing Assistant: 366</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Brownfields Program: 58</td>
</tr>
</tbody>
</table>

* Number of degrees awarded

DISTANCE LEARNING

Curriculum Students Taking an Online Course: 2,314
Curriculum Course Sections Offered Online: 248
Students enrolled in both online and seated classes: 1,671
Average Age of a Curriculum Online Student: 32

Program options available completely online: Associate in Arts, Clinical Trials Research Level II Certificate, Occupational Safety Certificate, and Optical Apprentice Certificate

CURRICULUM PROGRAMS

Number of Program Options

| Arts, Sciences, and University Transfer: | 7 |
| Business and Public Service Technologies: | 29 |
| Health Technologies: | 22 |
| Industrial Technologies: | 21 |
| Information Technologies: | 21 |

Total Program Options: 100

FINANCIAL PROFILE

| Total Revenues: | $38,348,135 |
| Total Expenditures: | $34,691,792 |

Students Receiving Financial Aid: 2,373

* Data are from 2007-2008 fiscal year. ** Some revenue comes from combined sources; these two categories were included in State Sources.

DTCC Mission: Enrich students' lives and the broader community through teaching, learning, and service.
FACULTY and STAFF

Fall 2009

Full-Time
299 Personnel (150 Faculty and 149 Staff)

Part-Time
534 Personnel (456 Faculty and 78 Staff)

LEARNING RESOURCES CENTER/LIBRARY

- Items in Collection: 43,722
- Audiovisual Materials: 5,461
- General Circulation: 13,255
- E-Books: 4
- Serial Subscriptions: 204
- Reserve Circulation: 9,796
- Microforms: 94,678
- Electronic Reference: 189
- Interlibrary Loan Items: 286

Librarians did 165 presentations to class groups, with a total attendance of 3,104

*Data are from July 1, 2007-June 30, 2008

FACILITIES

<table>
<thead>
<tr>
<th>Campus Size (Acres)</th>
<th>Campus Size (Sq. Ft.)</th>
<th>Parking Spaces</th>
<th>Number of Buildings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Campus</td>
<td>74</td>
<td>419,400</td>
<td>1,834</td>
</tr>
<tr>
<td>Northern Durham Center</td>
<td>28</td>
<td>38,800</td>
<td>260</td>
</tr>
<tr>
<td>Orange County Campus</td>
<td>20</td>
<td>40,000</td>
<td>200</td>
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</tbody>
</table>

ACREDITATION

Durham Technical Community College is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools (http://www.sacscoc.org/), 1866 Southern Lane, Decatur, GA 30033, 404-679-4500 to award associate degrees.

Programs with Additional Accreditation

- Associate Degree Nursing
- Basic Law Enforcement
- Dental Laboratory Technology
- Occupational Therapy Assistant
- Emergency Medical Services (Communicating Education)
- Medical Assisting
- Opticianry
- Pharmacy Technology
- Practical Nursing
- Respiratory Therapy
- Surgical Technology

DURHAM COUNTY

Population: 262,715

- Gender (2008): 49% Male, 51% Female
- Race (2008): 48% White, 36% Black, 15% Other
- Age 18+ (2008): 75%

Per Capita Income (2007): $37,308
Annual Not Seasonally Adjusted
Unemployment Rate (2008): 4.9%

Sources: NC Department of Public Instruction, Durham Public Schools, US Census Bureau and US Bureau of Economic Analysis

ORANGE COUNTY

Population: 126,532

- Gender (2008): 47% Male, 53% Female
- Race (2008): 77% White, 13% Black, 10% Other
- Age 18+ (2008): 81%

Per Capita Income (2007): $43,844
Annual Not Seasonally Adjusted
Unemployment Rate (2008): 4.0%

Sources: NC Department of Public Instruction, Orange County Schools, Chapel Hill-Carrboro Schools, US Census Bureau and US Bureau of Economic Analysis

CONTACT INFORMATION

- Durham Technical Community College: 1637 Lawson Street, Durham, NC 27703
  (919) 536-7200
- Northern Durham Center: 2401 Snowhill Road, Durham, NC 27712
  (919) 536-7240
- Orange County Campus: 525 College Park Drive, Hillsborough, NC 27278
  (919) 536-7238
- Web Site: www.durhamtech.edu

DTCC Mission: Enrich students' lives and the broader community through teaching, learning, and service.
Durham Technical Community College is dedicated to helping students achieve academic success. Recent data related to our Achieving the Dream initiative have shown us that our students must overcome many difficulties in order to get to your classroom and be able to stay focused and committed to their studies. The Academic Alert Tutoring / Early Alert Counseling Program has been designed to help you offer assistance to your students who may be in danger of not completing your course successfully. If you send this form to the Academic Alert Tutor and/or Early Alert Counselor services will be offered to your student to help him/her stay on track.

Student’s Name: ____________________________________________________________
Student’s Colleague ID: ______________________________________________________
Student’s current phone number: ______________________________________________
Student’s current e-mail address: _____________________________________________
Date: _____________________________________________________________________
Course and Section Number: _________________________________________________
Instructor’s Name (print): __________________________ Signature: ________________
Instructor’s contact information: ______________________________________________

This student is being referred for Academic/Early Alert due to the following issue(s):

*Academic Issues (refer to CAE Academic Alert tutor): **Life Issues (refer to Early Alert Counselor):

☐ Is struggling with reading skills ☐ Does not have textbook or class materials
☐ Is struggling with writing skills ☐ Indicates transportation problems
☐ Is struggling with math skills ☐ Indicates a health problem
☐ Has difficulty with study skills ☐ Indicates child care problems
☐ Has difficulty with research skills ☐ Indicates personal problems
☐ Has difficulty with oral comm. skills ☐ Indicates financial problems
☐ Violated Academic Honesty policy ☐ Exhibits changes in demeanor
☐ Has not turned in assignments ☐ Does not actively participate in class
☐ Is often late for class or absent from class

Please describe the nature of the concern:
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Please describe the steps you have taken to assist the student:

☐ Talked about study skills, test prep, etc. ☐ Met with student during office hours
☐ Referred student for tutorial services ☐ Referred student to Counseling Services
☐ ☐

Be sure to notify the student that you are referring him/her for assistance. If the student is struggling with life issues, send this form to the Counseling Office, Wynn Center, room 1309, and keep a copy for your files. If the student is struggling *academically, send this form to the Academic Alert Tutor in the CAE, Wynn 1310.
Center for Academic Excellence
Located on the third floor of the Wynn Center, room 1310K on the main campus
(Services are available to Durham Tech students only)

<table>
<thead>
<tr>
<th>Computer Lab</th>
<th>Special Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Wynn Center 1305)</td>
<td>Self-paced instruction</td>
</tr>
<tr>
<td>M ~ TH</td>
<td>Register as you would for any course</td>
</tr>
<tr>
<td>9:00 am ~ 8:00 pm</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td></td>
</tr>
<tr>
<td>9:00 am ~ 1:00 pm</td>
<td></td>
</tr>
<tr>
<td>S</td>
<td></td>
</tr>
<tr>
<td>10:00 am ~ 2:00 pm</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Writing and Reading Center</th>
<th>Math Center</th>
</tr>
</thead>
<tbody>
<tr>
<td>Get help improving your writing</td>
<td>Get help for all math levels or statistics</td>
</tr>
<tr>
<td>Get handouts and learn grammar tips</td>
<td>Watch instructional videos and get handouts</td>
</tr>
<tr>
<td>Prepare for the DRP test</td>
<td></td>
</tr>
<tr>
<td>M ~ W</td>
<td>M ~ TH</td>
</tr>
<tr>
<td>10:00 am ~ 7:30 pm</td>
<td>10:00 am ~ 7:30 pm</td>
</tr>
<tr>
<td>TH</td>
<td>F &amp; S</td>
</tr>
<tr>
<td>10:00 am ~ 6:30 pm</td>
<td>10:00 am ~ 2:00 pm</td>
</tr>
<tr>
<td>F &amp; S</td>
<td></td>
</tr>
<tr>
<td>10:00 am ~ 2:00 pm</td>
<td></td>
</tr>
<tr>
<td>Iva, Lorna, Mickey, or Trevor</td>
<td>Dan, David, Kathy, Natasha, Ruth, Sharon, Susan E., Susan M., or Yan</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Spanish Tutor</th>
<th>Statistics Tutor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Get help with writing and speaking skills</td>
<td>M &amp; W</td>
</tr>
<tr>
<td>T &amp; TH</td>
<td>3:00 pm ~ 7:30 pm</td>
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<tr>
<td>W</td>
<td>1:00 pm ~ 5:00 pm</td>
</tr>
<tr>
<td>Ann</td>
<td>Ruth &amp; Yan</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Science Tutors</th>
<th>Important Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Get help with your science skills</td>
<td>START Dates</td>
</tr>
<tr>
<td>Biology, Chemistry, A &amp; P, Physics</td>
<td>Special Courses:</td>
</tr>
<tr>
<td>M</td>
<td>M, August 17</td>
</tr>
<tr>
<td>10:00 am ~ 3:00 pm</td>
<td>Computer Lab:</td>
</tr>
<tr>
<td>F</td>
<td>M, August 17</td>
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<tr>
<td>10:00 am ~ 2:00 pm</td>
<td>Tutoring:</td>
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<tr>
<td>TH</td>
<td>M August 24</td>
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<tr>
<td>10:00 am ~ 1:30 pm</td>
<td>Holidays (All CAE services closed)</td>
</tr>
<tr>
<td>Physics</td>
<td>M 9/7</td>
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<tr>
<td>Sharon</td>
<td>T~S 10/13, 10/14, 10/15, 10/16, 10/17</td>
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<tr>
<td>Susan E.</td>
<td>Special Courses:</td>
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<td></td>
<td>W, Dec 16 at 5:00 pm</td>
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<td>Computer Lab:</td>
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<tr>
<td></td>
<td>W, Dec 16 at 5:00 pm</td>
</tr>
<tr>
<td></td>
<td>Tutoring:</td>
</tr>
<tr>
<td></td>
<td>S, Dec 12 at 2:00 pm</td>
</tr>
</tbody>
</table>

Dr. Christine Kelly-Kleese
Dean (536-7231 Ext. 2402)

Ms. Karen Jackson
Director (536-7232 Ext. 2403)

FALL 2009
# Durham Technical Community College

**Revised Spring Semester**  
**PLAN OF STUDY**  
**Effective Fall Semester**  
**2008**  
**AUTOMOTIVE SYSTEMS TECHNOLOGY (A60160)**  
**Associate Degree**  
**Day Program**

The following plan of study is the standard curriculum for the above program. Any deviation from the prescribed curriculum must have approval in advance. All prerequisite course requirements must also be met. To graduate the student must successfully complete all the required courses, the required credit hours for electives, and have at least a 2.0 overall grade point average. This plan of study is subject to change when the college thinks such action is in the best interest of the student or the program. It is the responsibility of the student to meet requirements for graduation. If accepted students do not enroll for three successive semesters, they must contact the Admissions office to determine if readmission is necessary.

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Hours</th>
<th>Grade</th>
<th>Semester</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Class</td>
<td>Lab</td>
<td>Credit</td>
<td></td>
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<tr>
<td><strong>FALL SEMESTER, 2009</strong></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>ACA 122 College Student Success</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td></td>
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<tr>
<td>AUT 110 Intro to Auto Technology</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td></td>
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<tr>
<td>AUT 116 Engine Repair</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td></td>
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<tr>
<td>AUT 141 Suspension &amp; Steering Sys</td>
<td>2</td>
<td>3</td>
<td>3</td>
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<tr>
<td>AUT 151 Brake Systems</td>
<td>2</td>
<td>3</td>
<td>3</td>
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<tr>
<td>CIS 110 Introduction to Microcomputers</td>
<td>2</td>
<td>2</td>
<td>3</td>
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<tr>
<td><strong>SPRING SEMESTER, 2010</strong></td>
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<tr>
<td>ENG 111 Expository Writing*</td>
<td>3</td>
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<td>3</td>
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<td>AUT 161 Basic Automotive Electricity</td>
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<td>3</td>
<td>5</td>
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<td>AUT 181 Engine Performance I</td>
<td>2</td>
<td>3</td>
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<td>AUT 221 Auto Transm/Transaxles</td>
<td>2</td>
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<td>Social Science Elective</td>
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<td><strong>SUMMER TERM, 2010</strong></td>
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<tr>
<td>AUT 171 Auto Climate Control</td>
<td>2</td>
<td>4</td>
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<td>AUT 183 Engine Performance II</td>
<td>2</td>
<td>6</td>
<td>4</td>
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<tr>
<td>AUT 231 Man Trans/Axles/Drtrains</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td></td>
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<tr>
<td><strong>FALL SEMESTER, 2010</strong></td>
<td></td>
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<tr>
<td>COE 111 Co-op Work Experience I</td>
<td>0</td>
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<td>1</td>
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<tr>
<td>MAT 115 Mathematical Models*</td>
<td>2</td>
<td>2</td>
<td>3</td>
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<tr>
<td>AUT 163 Adv Auto Electricity</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td></td>
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<tr>
<td>AUT 211 Automotive Machining</td>
<td>2</td>
<td>6</td>
<td>4</td>
<td></td>
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<tr>
<td>AUT 281 Adv Engine Performance</td>
<td>2</td>
<td>2</td>
<td>3</td>
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<tr>
<td>HUM 115 Critical Thinking</td>
<td>3</td>
<td>0</td>
<td>3</td>
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<td><strong>SPRING SEMESTER, 2011</strong></td>
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<tr>
<td>COE 121 Co-op Work Experience</td>
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<td>10</td>
<td>1</td>
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<tr>
<td>PHY 110 Conceptual Physics</td>
<td>3</td>
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<td>PHY 110A Conceptual Physics Lab</td>
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<td>ENG 112 Argument-Based Research</td>
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<td>3</td>
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<tr>
<td>AUT 114 Safety and Emissions</td>
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<tr>
<td>Major Elective</td>
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<tr>
<td>Required courses</td>
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<tr>
<td>Major Elective</td>
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<tr>
<td>Social Science Elective</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL SEMESTER HOURS REQUIRED FOR A.A.S. DEGREE</strong></td>
<td><strong>74</strong></td>
<td></td>
<td>(over)</td>
<td></td>
</tr>
</tbody>
</table>
*ENG 070, ENG 080, ENG 090, ENG 090A, MAT 050, MAT 060, MAT 070, RED 070, RED 080, or RED 090 may be required based on placement test results.

Social Science Electives: ANT 210, ANT 220, ECO 251, ECO 252, GEO 111, GEO 112, HIS 111, HIS 112, HIS 121, HIS 122, HIS 131, HIS 132, HIS 236, POL 120, POL 220, PSY 150, PSY 241, PSY 263, PSY 281, SOC 210, SOC 213, SOC 215, SOC 220, SOC 225

SOCIAL SCIENCE ELECTIVE:

Major Elective: AUT 285 Alternative Fuels or AUT 283 Advanced Auto Electronics

V.A. Students: An approval signature from the V.A. Office is required before registering. Some courses may not be certifiable.
The following plan of study is the standard curriculum for the above program. Any deviation from the prescribed curriculum must have approval in advance. All prerequisite course requirements must also be met. To graduate the student must successfully complete all the required courses, the required credit hours for electives, and have at least a 2.0 overall grade point average. This plan of study is subject to change when the college thinks such action is in the best interest of the student or the program. It is the responsibility of the student to meet requirements for graduation. If accepted students do not enroll for three successive semesters, they must contact the Admissions Office to determine if readmission is necessary.

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Class</th>
<th>Lab</th>
<th>Credit</th>
<th>Grade</th>
<th>Semester</th>
<th>Remarks</th>
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<td>MAC 121 Introduction to CNC</td>
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<td>MAT 101 Applied Mathematics I*</td>
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<td>MAC 124 CNC Milling</td>
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<td>MAC 224 Advanced CNC Milling</td>
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**TOTAL SEMESTER HOURS REQUIRED FOR DIPLOMA:** 48

*ENG 070, ENG 080, ENG 090, ENG 090A, MAT 050, MAT 060, RED 070, RED 080, or RED 090 may be required based on placement test results.

V.A. Students: An approval signature from the V.A. Office is required before registering. Some courses may not be certifiable.
Organizational Structure for Gateway to College at Durham Technical Community College

Student Engagement and Transitions (SET)
- Dean
- Secretary

First-Year Experience (FYE)
- Director
- Faculty
- Advisors
- CHIRP (Reading Program)
- 20 full-time faculty
- 4 administrators
- 200+ advisors
- 5,000 students

Gateway to College (GTG)
- Director
- Secretary
- Resource Specialists
- Faculty
- Drop out into remedial classes
- No credit or development
- Mailing development courses
- Specific business
- 12.1 credits per pupil

Developmental Education (DE)
- Math Chair
- English/Reading Chair
- Faculty
- 15 full-time

Center for Academic Excellence (CAE)
- Director
- Faculty/Tutors
- Lab Monitors
- Academic Alert
- 20-25 tutors
- Professional
<table>
<thead>
<tr>
<th>Durham Tech Program</th>
<th>Target Age</th>
<th>Admissions Requirements</th>
<th>Location</th>
<th>Timeline</th>
<th>Targeted for Non-Native Speakers of English?</th>
<th>Expected Learning Outcome</th>
<th>Finances</th>
<th>Durham Tech Contact</th>
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<tbody>
<tr>
<td>Adult Basic Education (ABE)</td>
<td>18+</td>
<td>Orientation. Must not have attended HS in 6 months; At least one TABE score below 8.9 grade level</td>
<td>Multiple entry points</td>
<td>Higher-level ESL students without a HS diploma may enroll</td>
<td>Skill development up to 9th-grade level</td>
<td>Free</td>
<td>Betty Lyons <a href="mailto:lyonsb@durhamtech.edu">lyonsb@durhamtech.edu</a> 536-7219 ext. 3103</td>
<td></td>
</tr>
<tr>
<td>Yating Adult Basic Education (YABE)</td>
<td>16-18</td>
<td>Orientation. Must not have attended HS in 6 months; At least one TABE score below 8.9 grade level; Notarized consent from parent/guardian; HS disciplinary record</td>
<td>Multiple entry points</td>
<td>No</td>
<td>Skill development up to 9th-grade level</td>
<td>Free</td>
<td>Yanta Sanchez-Brown <a href="mailto:sancheyy@durhamtech.edu">sancheyy@durhamtech.edu</a> 536-7218 ext. 3002</td>
<td></td>
</tr>
<tr>
<td>GED</td>
<td>18+</td>
<td>Orientation. Must not have attended HS in 6 months; 6th-grade math level recommended</td>
<td>Main Campus</td>
<td>Part time</td>
<td>Higher-level ESL students without a HS diploma may enroll</td>
<td>GED</td>
<td>Students must purchase a calculator and books</td>
<td>Beatrice Muhammad <a href="mailto:muhammadb@durhamtech.edu">muhammadb@durhamtech.edu</a> 536-7220 ext. 3207</td>
</tr>
<tr>
<td>Adult High School (AHS)</td>
<td>18+</td>
<td>Orientation. Must not have attended HS in 6 months; At least 10 HS credits completed</td>
<td>Main Campus</td>
<td>Part time</td>
<td>Higher-level ESL students without a HS diploma may enroll</td>
<td>AHS Diploma (22 credits)</td>
<td>Students must purchase books</td>
<td>Beatrice Muhammad <a href="mailto:muhammadb@durhamtech.edu">muhammadb@durhamtech.edu</a> 536-7220 ext. 3207</td>
</tr>
<tr>
<td>Breaking Through (BT)</td>
<td>20+</td>
<td>Orientation. At least one TABE score within 4-8.9 grade level on reading, math, or English</td>
<td>Main Campus</td>
<td>Multiple entry points</td>
<td>Higher-level ESL students without a HS diploma may enroll</td>
<td>ABE skill development; GED or AHS; then college-level credential</td>
<td>Paid by program, with incentive awards for students</td>
<td>Gregory Bellamy <a href="mailto:bellamyg@durhamtech.edu">bellamyg@durhamtech.edu</a> 536-7218 ext. 3251</td>
</tr>
<tr>
<td>Gateway to College (GTC)</td>
<td>16-20</td>
<td>Orientation. Reading level 8th grade or higher; Application and interview process required</td>
<td>Main Campus</td>
<td>Intensive, Full-time semesters</td>
<td>No</td>
<td>HS diploma (from home HS – 28 credits); college credits (dual enrolled)</td>
<td>Paid by program</td>
<td>Christina Kelle, (SET)</td>
</tr>
<tr>
<td>English as a Second Language (ESL)</td>
<td>18+</td>
<td>Placement testing by ESL department before or during registration</td>
<td>Main Campus; various off-campus locations</td>
<td>Part-time, semester basis</td>
<td>Yes</td>
<td>English language development, primarily survival skills</td>
<td>Registration is free; students may choose to purchase books</td>
<td>ESL Office <a href="mailto:es@durhamtech.edu">es@durhamtech.edu</a> 536-7221 ext. 3228</td>
</tr>
<tr>
<td>Middle College High School (MCHS)</td>
<td>16-18</td>
<td>Juniors and Senior only; must have completed Algebra 1, Geometry, Biology, English 1, English 2</td>
<td>Main Campus</td>
<td>Rolling admission until 1st day of school; mid-year acceptance also an option</td>
<td>No</td>
<td>HS diploma; college credits (dual enrolled)</td>
<td>Free (includes textbooks)</td>
<td>Dr. Charles Nolan <a href="mailto:charles.nolan@duxpanc.net">charles.nolan@duxpanc.net</a> 536-7203 ext. 1201</td>
</tr>
</tbody>
</table>
My Observations

Although the challenges facing us because of so many severely underprepared students seem overwhelming, there's hope. It won't happen overnight. But it can happen. Of course, there's always the issue of resources. In this effort, however, I see will as being much more important than money. We need leadership with the will to endure short-term, and, perhaps, profound discontent for long-term success in the lives of the students who need us the most.

Of course, our work is just beginning, but my fact-finding tour revealed to me a few changes that, I believe, are absolutely vital for the success we want and our students have to have. For one, we should stop using the word remedial. Yes, this appears simply cosmetic, but it's possibly conceptual as well.

More importantly, Honolulu Community College has to create a curriculum sequence of developmental reading apart from developmental writing. Again, what exists now isn't the issue. There's no one and no time for blame. Here's what the people I interviewed had to say about underprepared students and the importance of teaching reading:

- Dr. Hunter Boylan, "for a college to achieve success with underprepared students, they simply must require remedial and developmental reading for students testing into it."

- Dr. Barbara S. Bonham, senior researcher for the National Center on Developmental Education, "It's virtually insane for any college not to teach developmental reading in its developmental education program."

- Dr. Christine Kelly-Kleese, Dean and Department Head of Student Engagement and Transitions, "A student's reading ability is directly tied to success in mathematics, writing, and his or her program success overall."

Finally, Honolulu Community College must raise its standards for awarding degrees. I've always been proud to teach here, extremely proud. Yet, I was embarrassed showing the degree requirements and course descriptions in our latest catalog—especially for the A.A.S.—to people
at Cleveland State and Durham Tech. For one, you can obtain a college degree in several programs from Honolulu Community College without taking a single course in writing: For example, our Eng 51 or Technical Reading, Dean Wood of CSCC equates the course to their DSPR 0800, only the second course in their developmental reading curriculum. Keep mind, many HCC degree-programs actually recommend Eng 51. Durham Tech’s Dr. Kelly-Kleese equates our Eng 51 to Durham Tech’s RED 080, again, only the second course in their developmental reading curriculum.

Concerning our Math 24, Math 25, and Math 50, CSCC’s Karen Wyrick equates HCC’s Math 24 to their DSPM 800, second course in the sequence; Math 25 equates to their DSPM 850, the third and final course in their developmental math sequence; and our Math 50, she equates to their DSPM 800 with some geometry added. In many states, it’s illegal to award actual college degrees, not certificates, with remedial/developmental coursework. I refuse to believe that our students are so much more incapable than students in rural Tennessee or urban Durham, North Carolina.