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TO: Members of the President's Cabinet
FROM: William Heineman, Vice President of Academic and Student Affairs
DATE: March 2, 2017
RE: Final Program Audit and Other Cost Savings Recommendations

Over the last several months, the college has engaged in a program audit process—consisting of Program Portfolio, Financial, and Other Impact Analyses—to take stock and ultimately action on the number and composition of academic certificate and degree programs we offer. Assuring our mix of programs is the best for our students and community is always important, and the sharp decline in enrollment in recent years makes the current audit urgent. The attached spreadsheet shows the results of the audit. The outcome of the three analyses are shown for each program, and the color coding aids in seeking patterns: green showing particularly promising programs, blue showing programs that are in acceptable shape at this time, and red showing programs that are struggling. Also attached is a final summary table of the major recommendations.

The draft recommendations were shared with the college community last week. We received more than 50 direct responses either through the Wufoo form provided or through separate emails. Well over half of these responses were dedicated to support for the General Studies: Dance Program or that program and other Arts programs in general. In addition, it should be noted that a Change.org petition in support of the Dance Program garnered 391 supporters (as of Thursday morning) and a student email supporting the Theater Program had 121 signatures. There were multiple concerns expressed about the recommendations related to the Deaf Studies Program, General Studies: Art Program, ESL, and Supplemental Instruction. All of this feedback is attached for your review.

The feedback received highlights the great value of these programs to the people that have been touched by them:

- Regarding the **Performing Arts**, the large number of responses and their passion is impressive. The Other Impact Analysis was designed to capture this value and the Dance Program in particular received very high scores in that analysis. I share this viewpoint about the value of these programs, which makes the recommendations about them in this document painful to make. The enrollment in the Dance and Theater programs, however, has not really been able to sustain one certificate and two full associate degree programs (with regular courses offerings of even modest class sizes) in recent memory. I believe we can continue to support student interest in this area and the culture of Performing Arts at NECC in other ways.
- Feedback related to the **Deaf Studies** recommendations rightly points out that this is a field with strong potential for graduates, which makes the sustained low enrollment particularly frustrating. The challenge is that even when the college offered interpreting credentials—which

are in high demand—total enrollment in all the Deaf Studies credentials only topped 40 students twice in the last ten years, and that was at the height of the recession. I remain committed to rebuilding enrollment in these programs over time, but for the moment the workload in that discipline is not sufficient to sustain two full-time faculty.

- Similarly, the prospects for **ESL** enrollment may well improve over time—we certainly hope so. The comments indicate that multiple senior faculty are likely to retire in the next few years and that it would be a disservice to the college to layoff the current Coordinator, who is the most junior. I agree. Unfortunately, our current full-time faculty capacity exceeds teaching workload there unless we continue to run multiple low enrolled classes.
- The comments about the **General Studies: Art** reflect a similar hope for improved enrollments. I share the hope and applaud the work the faculty in that area are doing. Again unfortunately, it does not change the fact that in certain subspecialties, we are struggling to have regular workloads for some Day faculty.

As the person responsible for all the academic programs and all the students at the college (and potential students), I cannot in good conscience recommend keeping resources in areas that are serving fewer students—and in some cases not filling faculty workloads—while other areas have unmet needs and may be able to serve a significantly larger number of students, which would help the enrollment and budget situations and meet identified community needs. Overall, the need to reallocate resources toward programs with significantly greater student demand and the results of the Program Audit analyses indicate to me that the recommendations below are the right ones for the college, as difficult as they are. You, of course, will draw your own conclusions based on all of the information provided.

Based on the Program Audit analyses, the feedback received, and some other cost savings options we have developed, I submit the following final recommendations for your consideration and action:

New Investments

More than a third of the promising new program opportunities identified in the Program Portfolio Analysis were in the area of **Business**. At one time, the college had many options and certificates available in Business, but over the years we have shrunk those offerings down significantly. The Program Portfolio Analysis indicates that offering some more specific Business-related options could attract new students. The Financial Analysis indicates that our Business programs tend to have high net revenue gains and generally their Other Impact Analysis scores fell in the middle or top third of all programs. With approximately 800 students enrolled in our various Business programs, this is already a major part of the college but we currently employ just four full-time Business faculty. In order to expand in any new area of Business, new energy and expertise is needed. What is the best subfield of Business to pursue first? A recent feasibility study suggested strong job demand in the Culinary/Hospitality field in the Merrimack Valley. Other Culinary programs have closed recently, however, suffering from high costs and tuition. Moreover, employers do not always require a college credential in this field. The college has therefore been developing a low cost Culinary Certificate Program as a first stop on a pathway toward upward mobility for students/workers in the Hospitality industry through Associates and transfer degrees in Business fields. It has done so by constructing a partnership for transfer with Endicott College, as well as planning to take advantage of non-credit opportunities for training in the food service industry. Further partnerships with the Culinary Program at Whittier

Regional Vocational Technical School and the City of Haverhill is making it possible to offer a spectrum of training and education in the Culinary/Hospitality/Management fields in downtown Haverhill.

Recommendation: Pursue the development of the Culinary/Hospitality career pathway with our partners in downtown Haverhill, and immediately hire a new full-time faculty member in Hospitality/Culinary Arts to lead the effort, using state funds appropriated especially for this project (not part of the college budget).

The Program Portfolio Analysis listed Information Sciences as a program to consider starting and the existing CIS: Information Technology Option and Computer Networking Certificate were suggested as programs to grow. These programs tend to have high net gains, according to the Financial Analysis, and their Other Impact Analysis scores were in the middle and top third of all programs. Over 400 students currently are enrolled in **CIS** related majors at the college. The full-time faculty in the CIS Department are hard pressed to teach all the courses—DCE faculty are difficult to find in this high paying field—and cover the many subfields of expertise. The college is likely to be able to grow enrollments with an investment in faculty and high quality equipment in the CIS area. **Recommendation: Hire a new full-time faculty member in CIS for Fiscal Year 2018, and perform an inventory of existing equipment and software to make sure it is up to date.**

The Program Portfolio Analysis indicated that **Psychology** has a strong potential for enrollment, as long as students are able to transfer seamlessly to a Bachelor degree program. The Psychology faculty have been working on this under the Mass Transfer Pathways Initiative and are proposing creating a stand-alone AA degree to replace the current Liberal Arts Option in Psychology. The Financial Analysis indicates that Psychology is a high net gain discipline and program and the Other Impact Analysis provided a score in the middle third of programs. At this time only two full-time faculty are available in Psychology at the college, putting great strain on our ability to modify the curriculum and teach the very large number of sections each semester. Over 200 students are enrolled in the Psychology Option. **Recommendation: Hire a new full-time faculty member in Psychology for Fiscal Year 2018 and create a stand-alone AA degree.**

The Program Portfolio Analysis also suggested Physical Therapy Tech/Assistant, Cardiovascular Technology, and Math as potential new programs to consider at the college. These potential programs need more exploration before substantial investments are made in them. **Recommendation: The Health Professions Division will study the Physical Therapy and Cardiovascular Tech Program ideas and the Math Department will consider the potential of developing a stand-alone Associates Degree in Math and report back by the end of 2017.**

Existing Program Changes

There are numerous recommendations in this section and they are grouped alphabetically by department, division and/or discipline.

The Program Portfolio Analysis suggested that the **Automotive Technology Certificate** should grow and might need some fixing to do so. The current curriculum should be reviewed for any necessary changes and opportunities for collaboration with local vocational technical high school programming need to be clarified. **Recommendation: By Summer 2017, review the curriculum, clarify the opportunities for partnerships with local high schools, and then make a decision about the direction of the program going forward.**

The Program Portfolio Analysis suggested that the **Business** Transfer Program should grow and that the Accounting, Business Management, and Business Management: Computer Applications Programs need some fixing. In most cases, the issues raised had to do with the various programs' foci, particularly transfer vs. vocational. All of these programs have relatively high net gains, according to the Financial Analysis, and at least score in the middle third of all programs on the Other Impact Analysis. All have strong enrollments with the exception of Business Management: Computer Applications.

Recommendation: The Business Department will review its Business Transfer, Business Management, and Accounting Programs to assure they are optimally designed to meet student demand, whether it be for transfer or vocational goals. The Department will consult with the Computer Information Sciences Department about the Business Management: Computer Applications Program and consider changes needed in context of the work CIS will be doing with the CIS: Applications Option (see below) to assure we are meeting student needs and not offering redundant programs. These reviews will be completed by the end of 2017.

The Program Portfolio Analysis suggested that the college inactivate the Computer Forensics, Help Desk, Information Technology Fluency, and Web Page Design and Development Certificates and to work on fixes for the Computer Applications and Computer Security Certificates and the CIS: Applications Option. Consultation with the **CIS** Department indicates that job inquires to the college for the Help Desk and Web Design Certificates are actually strong and that the Security Certificate could be substantially strengthened by linking it to the Networking curriculum. The Financial and Other Impact Analyses tend to support the notion that all these programs need at least substantial changes, if not closure.

Recommendation: Inactivate the Computer Applications, Computer Forensics Basic, and Information Technology Fluency Certificates, assuring that current students can complete them. By the end of 2017, the CIS Department will propose solutions to address problems with the Security Certificate (perhaps by combining it with the Networking Certificate into a merged curriculum), the Help Desk Certificate (likely by rebranding and offering it in a Competency Based Education mode), the Web Design Certificate (enrollments need to rise if the job opportunities are actually strong) and the CIS: Applications Option, working in conjunction with the Business Department related to the Business Management: Computer Applications Option (see above).

The Program Portfolio Analysis suggested that the college grow the **Criminal Justice** Program. The Financial and Other Impact Analyses reveal a strong program in other respects as well. Although close to 300 students were enrolled in the program in Fall 2016, enrollment has been dropping for the last several years. **Recommendation: The Criminal Justice faculty will reinvigorate their efforts to launch the accelerated version of the program to connect professionals already working in the field with educational opportunities at NECC.**

The Program Portfolio Analysis suggested that the **Deaf Studies** curricula (two associate degrees and a certificate program) need to be fixed. A review of the programs actually suggests that they are well designed to allow students multiple pathways into the field while being mutually supportive of many of the same classes. Nevertheless, low enrollment (just 26 students across the three programs in Fall 2016) results in quite low class sizes: average of 12 in Spring 2017 compared to 18 in Spring 2012. This semester there are seven American Sign Language and Deaf Studies courses running during the day, but three of them have ten students or less in them; one has only five. Class sizes that low are not sustainable. The Financial Analysis confirms that these class sizes produce a net gain in the bottom third of all programs at the college for the two Deaf Studies Associate Degrees. The faculty have suggested reactivating an Interpreting Certificate aimed at students that already have a Bachelor's degree in another field. This may be worth exploring but based on the enrollment history when the college had

this certificate, it would not add more than 10-15 students. Moreover, our two Day full-time faculty dedicated to the program do not teach interpreting courses. Unfortunately, it has been barely possible to provide two full-time teaching workloads to those faculty in recent years. Nevertheless, the Other Impact Analysis indicates the substantial value of the existing programs and the Deaf and Hard of Hearing community confirm the need for well-prepared sign language interpreters; our programs are the first step on a pathway toward that profession. **Recommendation: Given the low enrollment, small class sizes, and challenges in finding full-time workloads for the existing Day faculty, consider a reduction in Day faculty. Explore the possibility of a new Interpreting Certificate and other means to increase enrollment. Review the enrollment situation again in Spring 2018.**

The Program Portfolio Analysis suggested that both the Early Childhood **Education** (ECE) Program and the Liberal Arts: Middle/High School Teaching Option need to be fixed. The ECE program has been suffering from falling enrollment (although it still had over 150 students in Fall 2016) and is in the bottom third of programs in terms of net revenue gain, according to the Financial Analysis. Low class sizes tend to explain that. The Liberal Arts: Middle/High School Teaching Option needs to make some curriculum changes and is in the bottom third of the ratings in the Other Impact Analysis.

Recommendation: The ECE faculty will capitalize on the new Performance Incentive Fund Grant to try to increase enrollments through the use of a Competency Based Education approach. The Education faculty will add education courses to the Liberal Arts: Middle/High School Teaching Option and concentrate on learning outcomes assessment work in the coming year.

In the **Health** curricula, the Program Portfolio Analysis suggested that the Medical Laboratory Technology Program should grow; that the General Studies: Movement Science Option, General Studies: Health Specialization Option, Business Management: Healthcare Practice, and Medical Billing Certificate need fixing; and that the Electronic Health Record Specialist (EHRS), Computed Tomography (CT), and Ophthalmic Assistant Certificates be inactivated. There is strong need for **Medical Laboratory Technicians** in the region but enrollment was only at 26 in Fall 2016 (although that was an increase from previous years), and the program is one of the few that loses money on each graduate, according to the Financial Analysis. The Other Impact Analysis gives this program a ranking in the middle third of all programs. Curriculum changes are needed to fix the **General Studies: Movement Science Option**. Both the **Business Management: Health Care Practice** and **General Studies: Health Specialization** degrees need dedicated faculty leadership—this has already been accomplished for the latter. The **Medical Billing Certificate** is in need of promotion. All four of these “fix” programs had mid-level rankings in the Financial and Other Impact Analyses compared to other programs. The **EHRS, CT, and Ophthalmic Assistant Certificates** have all been plagued by low enrollment: ten students or less in each in Fall 2016. CT and Ophthalmic are in the bottom third of programs in the financial analysis, the latter actually losing money per graduate. None of the three programs had strong scores in the Other Impact Analysis.

Recommendation: The Medical Laboratory Technology and Medical Billing Programs will by September 2017 produce a plan for boosting enrollment. Review enrollments in both programs again in Spring 2018. Necessary curriculum changes in the General Studies: Movement Science Program will be made by the end of Fall 2017. Appoint a Coordinator for the Business Management: Healthcare Practice Option by September 2017. Inactivate the EHRS and Ophthalmic Assistant Certificates, assuring that current students can complete them. Consider any necessary faculty changes as a result of these inactivations. Review new state credentialing requirements in the Computed Tomography field and rapidly determine whether to continue to offer the CT Certificate.

The Program Portfolio Analysis called for the **Liberal Arts** Program to grow. The program is one of the largest at the college (over 600 students in Fall 2016), boosted recently by the elimination of the General

Studies Program. Although this has raised enrollment, it also requires the program to help students that may be quite unsure about their academic interests and/or life plans to be successful. Faculty leadership of the program is already experimenting with a number of strategies likely to address this challenge (such as group advising) and the changes foreseen in the Academic Master Plan should help further with its emphasis on curricular structure, a sense of belonging for students, and the need to integrate efforts across departmental/bureaucratic lines. The Financial and Other Impact Analysis ratings for this program are in the mid-range of all programs. **Recommendation: Continue to work on making the Liberal Arts curriculum and wider experience one that is coherent, well-structured, and fun for students as well as meaningful in terms of preparing students for their future. Participate actively in the work of the Academic Master Plan to accomplish this.**

In the **Natural Science** curricula, the Program Portfolio Analysis called for the **Laboratory Science Program** to grow and for a fix to the **Liberal Arts: Physical Sciences Option**. The Lab Science program has over 50 students in it, but the regional demand for laboratory technicians is high and suggests more enrollments should be possible. Recent conversations with Pfizer, for instance, point toward growing employment opportunities for graduates. The program rated in the top third of programs in the Other Impact Analysis and in the middle third of programs with respect to net revenue gain, according to the Financial Analysis. The Liberal Arts: Physical Sciences Option had 30 students in Fall 2016. It may need curriculum changes to mesh better with Mass Transfer Pathways in science and a greater focus on Chemistry may conform more closely to regional employer demand. It may make sense for this program to be established as a stand-alone Associate in Science Degree, as recently occurred with Biology. This program ranks in the top third of programs in terms of net revenue gain, according to the Financial Analysis, and rates in the middle third of programs in the Other Impact Analysis. **Recommendation: Develop a plan for expanding enrollments and graduates in the Laboratory Science Program by September 2017. Consider necessary curriculum changes in the Liberal Arts: Physical Sciences Option and make recommendations by the end of 2017.**

Regarding the **Performing Arts**, the Program Portfolio Analysis suggested that the General Studies: Dance Option, General Studies: Music Option, and Liberal Arts: Theater Option Associate Degree Programs should be fixed or inactivated and the Dance Education and Music Technology Certificates be closed. Many of these programs have been plagued with low enrollment for years. In Fall 2016, the **General Studies Dance Option** had 17 students, the **Dance Education Certificate** had 8, the **Liberal Arts Theater Option** had 26, and the **Music Technology Certificate** had 14. With so few students, it is hard to achieve sustainable class sizes. Average class size in Dance courses is 10 this semester down from 14 in Spring 2012. This is not unusual: multiple directed studies are necessary every semester in Dance. Average Theater class size is 12 this spring, compared to 15 in Spring 2012, but this overstates the average because the calculation does not include small directed studies. Just four Theater courses are on the schedule this semester, one with 14 students, one with 9, one with 4, and one with 2 (average class size counting the directed studies is 7.5). Music average class size is also low this semester (8) but to some degree the financial impact is lessened because many of these classes are supported financially by a surcharge. The **General Studies: Music Option** also has a healthier overall enrollment: 39 last fall. The low class sizes translate into losses or low net financial gains across all the Performing Arts programs. Every one of the degree and certificate programs in the Performing Arts is in the bottom third of net revenue gains for the college, according to the Financial Analysis, with the Dance Education and Music Technology Certificates actually losing money per graduate. Ratings in the Other Impact Analysis ranked either in the middle or top third of all programs, however, reflecting the support these programs provide to an active, valuable, and meaningful culture of Performing Arts at the college. Moreover, the Music curricula has a new opportunity for transfer with the Music Business Program at

our Community partner Lyndon State College. **Recommendation: Inactivate the General Studies: Dance and Liberal Arts: Theater Options and the Dance Education Certificate, assuring that all current students can complete their degrees. Consider any faculty changes needed with these inactivations. Explore opportunities to meet future student demand for Dance or Theater interests through the General Studies: Individualized Studies curriculum. Continue to provide support for high demand Dance and Theater courses and for the Dance Club and Top Notch Players. By the end of 2017, complete a plan for increasing enrollment in the General Studies: Music and Music Technology Certificates, particularly by exploring improved transfer to Lyndon State College and other four year institutions. Review the status of the Music programs again in spring 2018.**

The Program Portfolio Analysis suggested that the **General Studies: Art** Program be fixed. This visual arts program had more than 130 students enrolled in Fall 2016, but the analysis noted that certain parts of this quite broad curriculum are plagued with low enrolled courses. We have struggled to fill workloads for some Day faculty in the program in recent years. Students may be confused by the name and structure of the program. General Studies: Art falls in the middle third of programs for net revenue gain, according to the Financial Analysis, and scores very highly in the Other Impact Analysis rating. **Recommendation: By the end of 2017, create a plan for any needed name, structure, or curriculum changes aimed at shoring up (or inactivating) parts of this program that currently suffer from low student interest. Consider a reduction in Day faculty given difficulty in filling some workloads.**

Other Cost-Savings Recommendations

It is likely that Academic and Student Affairs will be seeking and implementing numerous cost-savings measures separate from the Program Audit recommendations over the next several months in preparation for the Fiscal Year 2018 budget. What follows is an initial set of recommendations in addition to the Program Audit recommendations provided above. **It is not the final word** on cost-savings recommendations.

The college carefully monitors the capacity of each academic department and the availability of courses to fill full-time faculty workloads each year in preparation for the next budget. This review has raised concerns in the **English as a Second Language** (ESL) discipline this year. The number of students and credits earned in ESL has dropped drastically in recent years. In part this is a result of a necessary curriculum change. It also appears to result from a wider decline in the number of students pursuing ESL, which other community colleges around the state are experiencing. Unfortunately, this is now making it difficult to fill workloads for the five full-time faculty in ESL. For instance, in Spring 2017 if not for running two severely under enrolled sections (one at 6 students and another at 7) taught by Day faculty, there would not have been enough courses for the five Day faculty. Even with those two courses running, there was only enough workload because almost an entire day full-time workload (13.5 credit hours) was provided to faculty in ESL as reassigned time. This situation is not sustainable. **Recommendation: Consider reduction of one full-time faculty position in English as a Second Language.**

Since the adoption of the statewide Distance Education Agreement under the Division of Continuing Education (DCE) contract with the Massachusetts Community College Council (MCCC), Northern Essex has by policy limited **online and hybrid class size** compared to the contractual maximums allowed in the Agreement, for both initial offerings of those classes (20 instead of the contractually allowed 25) and later offerings (25 instead of the generally higher limits allowed in the MCCC DCE and Day contracts: up to 32). This policy was meant to encourage faculty to participate in distance education and, in order to

encourage students to enroll, it was paired with the practice of running additional small-size sections (sometimes called shadows) of distance education courses with faculty paid per student. With distance education enrollments growing in proportion to traditional ones (and no lack of faculty interest in distance education), the original rationale for this policy no longer exists and the voluntary limit has contributed to a steady decline in overall average class size at the college: 18 in Spring 2017 compared to 20 in Spring 2012. Although this decline appears small, it has substantial and negative financial ramifications for the college. **Recommendation: Starting with the Summer 2017 term, raise class size maximums to those allowed in the Distance Education Agreement: 25 for initial course offerings and whatever the contractual maximums are in the Day and DCE contracts for later offerings. (Note: maximum class sizes set in the contracts for courses like English Composition would remain below 25 under this new approach). Limit shadow sections of Distance Education courses to enrollments of 10 or above.**

For almost ten years the college has supported **Supplemental Instruction (SI)** in a variety of courses to improve student learning and completion rates. The Tutoring Center has had responsibility for the SI initiative. Over that time, analysis indicates that SI is quite effective but only in a narrow range of disciplines, particularly Math. Recent research suggests that even within Math, the positive impact is limited to a quite small set of courses. The college budget contributed more than \$50,000 to the delivery and support of Supplemental Instruction in Fiscal Year 2016, yielding a cost of more than \$500 for each student that participated in a section that benefited from SI. This is not sustainable. **Recommendation: The Tutoring Center will cease offering Supplemental Instruction as of Fall 2017. Academic Departments that can show positive impact of SI in their courses, may seek new funds in their budgets in Fiscal Year 2018 to support local SI initiatives. These Departments will have to perform the logistics of finding and scheduling SI leaders themselves.**