Task Force on Academic Excellence and Engagement

Draft Report

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The Task Force on Academic Excellence and Engagement (hereafter referred to as the 'TF') is charged with developing a white paper that puts forward a viable, integrated solution to the following:

A. Accreditation issues caused by the CEC;
B. Transfer credit issues related to our practice of accepting three credit courses as equivalents to 4-credit courses;
C. The revenue (or lack of revenue) issue created by the current work-load given to science faculty who teach labs;
D. The perceived inequities in current (and potentially future) teaching loads;
E. Scheduling and space issues created by one and two day a week classes;
F. Appropriateness of class scheduling for facilitation of student learning, particularly in 100 and 200 level courses;
G. The perception of low academic rigor and lack of flexibility within the curriculum;
H. The low level of academic engagement demonstrated by our students.

Approach to completion of tasks

The TF was formed in mid-October of 2014. The TF met for 1.5 hours each week, with extensive amounts of time outside of the meetings being required to undertake the research and perform the analyses of the data. The TF agreed to prioritize our meetings over other activities. In addition to the presentation of the TF recommendations on February 18, 2015, presentations of our progress was made to the FA in November 2014, December 2014, & January 2015.

A list of data for our study was developed by the Data Collection Committee (June – September 2014) and collected by the Administration. Three members of the TF served on the Data Collection Committee (Kristin, Jason, and Eric). Additional data was gathered by the TF as needed. This included the President's Financial Sustainability Task Force presentation of January 2014. Throughout our deliberations, the TF sought feedback from our colleagues, unit council, and an informal survey of 179 students across all five schools. We also contacted colleagues at other institutions, including Stockton and The College of New Jersey.

The authors of the report represent the five schools of the college and are active members of the college community. We assembled a sound report based on an interdisciplinary and collective competence, with the recommendations being data-founded. We had full and open discussions; all members fully participated. Consensus was reached on all recommendations. Our goal was to provide a report which reflected the best outcomes for the college community as a whole.

Task Force members

Eric Karlin is Professor of Plant Ecology and was hired by Ramapo College in Fall 1979. He is currently leading three collaborative research projects involving four colleagues across three universities. He has 1) served as Dean of TAS for six years (9/1999 – 8/2005); 2) served two years as the President of the Faculty Assembly (9/2006 – 8/2008), and 3) has been the chair of the organizing committee for Scholar's Day from its inception (in 2012/2013) to the present. He has the background and experience to explore the issues dealt with in this study from the perspectives of both the faculty and the Administration.

Jason Hecht is Professor of Finance and joined the college in 1998. He previously served on the FA Budget Committee (2011-2013) and FAEC (2006-2007).

Ruma Sen is Associate Professor of Communication Arts, specializing in Global Communication and Media. She has previously served as Co-Chair for the Diversity Action Committee and the International Education Committee along with serving as Contemporary Arts rep in many other all-college committees.

Lisa Cassidy is an Associate Professor Philosophy, specializing in ethics, and has been at the College since 2002.

Kristin Kenneavy is an Associate Professor of Sociology and the Faculty Fellow for Civic Engagement. She has served as Faculty Assembly Secretary (2009-2011), Chair of the American Democracy Project (2013-2015), on the Diversity Action Committee (2013-2014), on the SSHS Assessment Committee (2012-2015), and has worked with the Women's Center for seven years on issues of interpersonal violence prevention. She is a member of the Middle States Periodic Review Report (PRR) Team headed by Vice Provost Eric Daffron. Dr. Kenneavy has been with Ramapo College since 2008.

Roark Atkinson is a historian of the early modern Atlantic world. He teaches courses on colonial North America, colonial Latin America, the American Revolution, historiography, and American religious history. He serves on FAEC and AFT, and is convener of the Latino/a and Latin American Studies program. He has been at the college since 2008.

Rebecca Root is Associate Professor of Political Science and International Studies, co-founded the minor in Human Rights & Genocide Studies, and has been with the college since 2009. She currently serves as the Vice President of the Faculty Assembly Executive Council.

Executive Summary

Charge A. Accreditation issues caused by the CEC

Challenge: According to the Middle States Commission, the present curricular structure is not in compliance with accreditation standards. Currently students are awarded 4 credits for a class that is short of the contact time by 0.4 hours, necessitating curriculum enhancement (CEC). We find that that the accreditation issues are of paramount importance.

Recommendation: The TF recommends that Ramapo College should retain its 4-credit model, with faculty-student contact hours per week matching the Carnegie model (200 minutes per week). This would replace the current CEP model and would bring the curricular structure at Ramapo College into compliance with Middle States accreditation standards. Based on our modeling, adopting a 4-credit model with faculty teaching six courses per year would be more cost efficient than moving to a 3-credit with faculty teaching seven courses per year, with one course being assigned to released time.

Charge B. Transfer credit issues related to our practice of accepting 3-credit courses as equivalent to 4-credit courses

Challenge: Ramapo is part of the Comprehensive Statewide Transfer Agreement. In our current interpretation of it, transfer credits from institutions with 3-credit courses may be used to fulfill courses in their degree requirements as if the 3 credit course were equivalent to our 4-credit course.

Recommendation: The TF recommends that majors & minors require, in addition to specific courses, a minimum number of credits. Thus 3-credit transfer courses that fulfill course requirements would be deficient in credits. In such cases, students would need to take an additional elective (or electives) in the major/minor to fulfill the credit requirement.

This does not "solve" all the challenges associated with transfer equivalents (e.g. General Education courses), but the other challenges are linked to the Comprehensive Statewide Transfer Agreement and outside of the control of the college.

Charge C. The revenue (or lack of revenue) issue created by the current work-load given to science faculty who teach labs

There are two dimensions to this charge:

1. Teaching Credit hours (TCHs) for faculty teaching labs
2. Student Credit hours (SCHs) assigned to labs

Challenge: At Ramapo College, 'standard' lecture/lab courses have a full lecture component plus a lab component which meets once each week for 195 minutes. Under the Interim

Curriculum Model, although a faculty teaching the lecture portion of the course receive 4 TCHs and 4 TCHs for teaching the lab students are charged tuition for just 4 SCHs. Thus only 50% of the 8 TCHs associated with each 'standard' lecture/lab are covered by tuition, resulting in 4.0 'phantom' TCHs per standard lecture/lab.

Recommendations:

Dimension 1. The TF recommends that faculty compensation for teaching labs should be equivalent to that paid for teaching lectures (i.e. 1 TCH per hour of class meeting time per week). Faculty compensation for teaching labs should be equivalent to that paid for teaching lectures (i.e. 1 TCH per hour of class meeting time per week). The TF concludes that teaching science laboratories at Ramapo College unequivocally requires at least as much 'work' as teaching lectures. It is not ethical to reduce faculty compensation in order to help defray the cost of 'phantom credits' that are associated with students being charged no tuition (or reduced tuition) for the lab component of a lecture/lab course.
Dimension 2. The TF recommends that tuition for labs should be should be 0 – 1 Student Credit Hours (SCHs) per lab. This is the practice followed by many colleges and universities (the College of New Jersey charges 0 SCHs for labs and Stockton charges 1 SCH). It allows both curricular flexibility for science programs requiring a large number of lecture/labs (e.g. Biochemistry, Biology, Chemistry) and full time students to graduate in four years. Assigning ≥ 2 SCHS per lab would diminish (or eliminate) the curricular flexibility of science programs which require a large number of lecture/labs. It would completely demolish their 'four-year plans'.

Because of the hierarchal nature of science courses, many Gen Ed courses would likely not be taken until late in a student's academic career. Or, alternatively, many full time science students would have to: 1) take more than four years to graduate; 2) take course overloads to graduate in four years; and/or 3) take courses outside of the academic year to graduate in four years. Finally, assigning ≥ 2 SCHS per lab could result in potential students to decide against coming to Ramapo College to study science.

Charge D. The perceived inequities in current (and potentially future) teaching load

Challenge: There are both perceived inequities in teaching load among faculty and also the potential for inequities generated by possible future curricular models.

Recommendations:

1. The TF recommends a continuation of the 'normal' full time teaching load for tenure track faculty being six courses a year.

2. To avoid creating a significant inequity in teaching load, the TF strongly recommends that science faculty continue to receive 1 teaching credit hour for each hour of lab taught.

Charge E. Scheduling and space issues created by one and two day a week classes

Challenge: There is a perceived imbalance in the use of classroom space across the day and also the week, with insufficient capacity at some time slots and excess capacity at other times

Recommendations:

1. The TF recommends that distribution of classes across the week be more balanced, particularly with an increase in the number of class meetings on Wednesday.
2. The TF recommends that the 2013 Space Report's conclusions about the number of general purpose classrooms required to offer the schedule of classes be revisited.
    - Prior to any decision being made about changing the number general purpose classrooms on campus, the need for general purpose classrooms must be reassessed once the new curricular model has been implemented.
    - In addition, the report's conclusions about space needs in the near-term and long-term need to be revisited, particularly in terms of the projected need for office space.
3. The TF recommends that flexibility across many dimensions in class scheduling must be addressed prior to the implementation of the 'permanent schedule'. These dimensions include:

    - time and day when classes are scheduled;
    - frequency of course offerings;
    - number of class meetings per week;
    - online & in person & hybrid formats;
    - compressed or traditional schedules.

Charge F. Appropriateness of class scheduling for facilitation of student learning, particularly in 100 and 200 level courses

Challenge: The hypothesis implied in this charge is that students will learn more effectively if they do not take courses in a block (once a week), but instead meet for shorter duration classes of twice or thrice a week.

Recommendations:

1. The TF recommends that Ramapo offer classes once, twice and thrice a week, in addition to fully online and hybrid classes, for maximum flexibility.

2. The TF recommends that 100 and 200 level courses not be limited to a "twice and thrice a week' format.

    - Currently, educational psychology indicates that when college students space their study sessions apart, they have better learning outcomes (Willingham 2002). However, we are not aware of any body of evidence connecting how often college classes meet with student learning.

    - Distributed practice (spaced repetition, spaced practice) pedagogies can be applied to classes meeting once, twice, or thrice each week.

3. The TF recommends that the following steps be taken prior to the implementation of the scheduling of classes for the 'new permanent curricular structure'. In contrast to the constraints associated with the implementation of the Interim Curricular Model for 2015/2016, where there was a need to move quickly to comply with Middle States requirements, there is sufficient time for the process outlined below to occur.

    a. A survey of the faculty and/or convening groups be undertaken to determine the number of time slots actually required for classes meeting once, twice, or thrice a week.

    b. Convening groups should have flexibility in choosing the weekly meeting schedule and course format which best suits the needs of their courses.

    c. A survey of students should be undertaken for their feedback on their needs and the impact (from their perspective) of a new course schedule.

    Once steps a – c are accomplished, then:

    d. Determine the number of time slots required to meet the projected need for each of the various meeting options based on the information gained from steps a through c.

    e. The Provost, Deans, Registrar, and faculty should assess the impacts of the proposed schedule changes, and tweak the final model to facilitate its successful implementation.

    f. A major change in course scheduling should be announced at least one year in advance of implementation. This would allow faculty, students, and the college time to fully prepare and plan for the change; it would also minimize confusion and mistakes in the implementation process.

Charge G. The perception of low academic rigor and lack of flexibility within the curriculum

This charge has the following dimensions:

1. lack of flexibility within the curriculum
2. perception of low academic rigor
   – GPA
   – student perception of rigor

Challenge: The assertion in this portion of the charge is that 1) students do not perceive the academic climate of the college to be challenging and 2) that the curriculum lacks sufficient flexibility to allow for students to take minors and double majors.

Rather than reducing lack of flexibility, the move to the CEP model resulted in increased flexibility in the curriculum as measured by the number of students who completed a minor.

Recommendations: Lack of flexibility within the curriculum

1. To further enhance flexibility in the curriculum, the TF recommends the elimination (or, less preferably, a significant reduction) of restrictions on double counting in minors and majors.

   This would greatly increase flexibility for students within the Ramapo curriculum. It would significantly increase flexibility within the curriculum and be accomplished without forcing majors and minors programs to reduce their course requirements. This recommendation is particularly important if the State mandates a 120-credit cap on graduation requirements.

Recommendation: Perception of low academic rigor – GPA

1. The TF recommends that convening groups do a careful review of their grades, grade distributions, and the grading scales to be used.

   Ramapo College has had a persistent average GPA of about 3.1. The highly stable relative variation in Ramapo's overall GPA, as well as the absence of any significant apparent trend, do not support the inference that Ramapo's courses systematically lack academic rigor.

Recommendation: Perception of low academic rigor – student perceptions

1. The TF recommends the adoption of a full 4-credit hour course model as one approach to increasing student perception of academic rigor.

We extrapolate from our assessment of NSSE surveys that student perceptions of rigor may be related, in part, to the amount of time spent in the classroom, with longer class meetings being perceived as having more rigor.

The TF finds that, in comparison with the perceptions of first year students, significantly higher percentages of seniors perceive their courses to be more rigorous in terms of 'Level of Academic Challenge' (based on NSSE data from 2003 – 2012).

Based on the 2014 NSSE survey: Relative to students at peer institutions, the TF concludes from our assessment of NSSE surveys that first-year students at Ramapo College, on average, perceive that their courses are more rigorous, along a number of dimensions. Seniors report being assigned rigorous coursework, but such assignments do not appear to contribute to their assessment of overall rigor, which is lower than peer schools.

2. With respect to increasing the perception of rigor among Ramapo College students, the TF recommends the use of both focus groups and time-series analysis of NSSE data to isolate where problems exist. The focus needs to be on pedagogical strategies that speak to indicators that need improvement, rather than a wholesale focus on "increased rigor".

Charge H. The low level of academic engagement demonstrated by our students

Challenge: The assertion in this charge is that students at Ramapo College are not sufficiently engaged academically.

Conclusions/Recommendations:

The picture painted by the NSSE data for student academic engagement is mixed. The College is clearly succeeding in engaging students in a number of ways.

Our longitudinal look at engagement as measured by the NSSE is consistent with the results of our section on Academic Challenge. The move from a mixed-credit model to a uniform 3.6 credit model had almost no effect on first-year students' perceptions of engagement, and only improved engagement perceptions among seniors. Once again, we find no evidence that movement to a full 4-credit, uniform model would be detrimental to student engagement.

In comparison with the perceptions of first year students, the TF concludes that a significantly larger percentage of seniors perceive a higher level academic engagement in terms of 'Active and Collaborative Learning' and 'Enriching Educational Experiences' (based on NSSE data from 2003 – 2012).

1. The TF recommends maintaining small class sizes and high impact teaching practices.

Students report more quality interactions with faculty relative to peer institutions.

Current high impact teaching practices promote academic rigor and student engagement.

2. Given the recent and fairly substantial changes to the NSSE survey instrument, the TF recommends that several open forums with both faculty and professional staff be held to explain the kinds of activities that NSSE asserts promote student academic engagement.

   Student learning outcomes associated with curricular and co-curricular activities could be aligned with this new language and embedded in syllabi. As students become more aware of how their assignments and co-curricular experiences speak to engagement goals though exposure to the terminology, scores on NSSE items might be expected to go up.

3. With respect to the consistently low marks given to various student support offices around campus, the TF recommends that professional staff working in those areas be made aware of the NSSE results (perhaps via the open forums suggested above). Managers in those areas should be encouraged to improve the experiences of students who interact with their offices.

I. Addendum

Although not part of our 'charge', the TF concludes that a 4-credit course model would be the optimum curricular model for both 120 and 128 credit graduation requirements.

Charges and Methods: Narrative

Charge A. Accreditation issues caused by the CEC

Method: We researched how student credits are earned at the College of New Jersey and Stockton State College, to compare their credit models with our own because these colleges are of a similar size, are bound by the same state master contract, and also work on a 4-credit model. Both of these colleges had success with respect to credit hours in their previous reports. Currently, Ramapo students are awarded 4 credits for a class that is short of the contact time by 0.4 hours, necessitating curriculum enhancement (CEC). We find that that the accreditation issues are of paramount importance.

A summary of those findings:

Stockton (historically has been 4 credits)

- 3 – 3 teaching load
- 4 teaching credits for each course
- No CEC, no flex
- No discussion of research or service available through documents.
- Classes meet 1, 2 or 3 three times per week
- 2012 Middle States report – very positive with respect to credit hours

TCNJ ("Transformation" launched in Fall 2004)

- 3 – 3 teaching load
- 3 teaching credits for each course (18 credits total), 3 credits for "scholarship or creative activities, 3 credits for "continuing course design a advising/mentoring responsibilities"
- Each course requires an extra 1-hour "conference section" (student attendance not required)
- Middle States 2004 study & 2010 Periodic Review Report indicated no problem with this curricular structure
- Issues with the TCNJ "Transformation" may be appearing
- August 2014 memo states that all syllabi must provide information on how the "fourth hour is fulfilled"
- Informal feedback reveals that overall faculty are satisfied with the current structure, but apprehensive of change coming from the next Middle States review

In light of the above comparative findings, we conclude that a 4-credit model that requires the requisite number of minutes in class under the Carnegie system will be acceptable under the Middle States accreditation standards.

Comparison of need for adjunct/overload credits across different credit systems

A model was developed to explore the relative cost of adopting three different course load options: 1) 3-credit courses with 7 sections taught each year; 2) 4-credit courses, with 6 sections taught each year; 3) the current model: 3.6(4)-credit courses, with six sections taught each year.

Assumptions of model

- 5000 undergraduate students (FTE)
- each student takes a full course load
- mean class size = 25 students
- 200 full time faculty

Based on this model the option requiring the largest number of adjunct instructors needed to cover course sections not covered by full time faculty (FTF) was Option 1 (Figure X-1). The number of adjuncts required by Options 2 and 3 was identical, but with Option 3 the college effectively had more tuition because adjuncts were paid 3.6 credits for each course while students paid 4.0 credits (Figure X-1). Based on this, it is clear that moving to Option 1 would be more expensive than moving to Option 2.

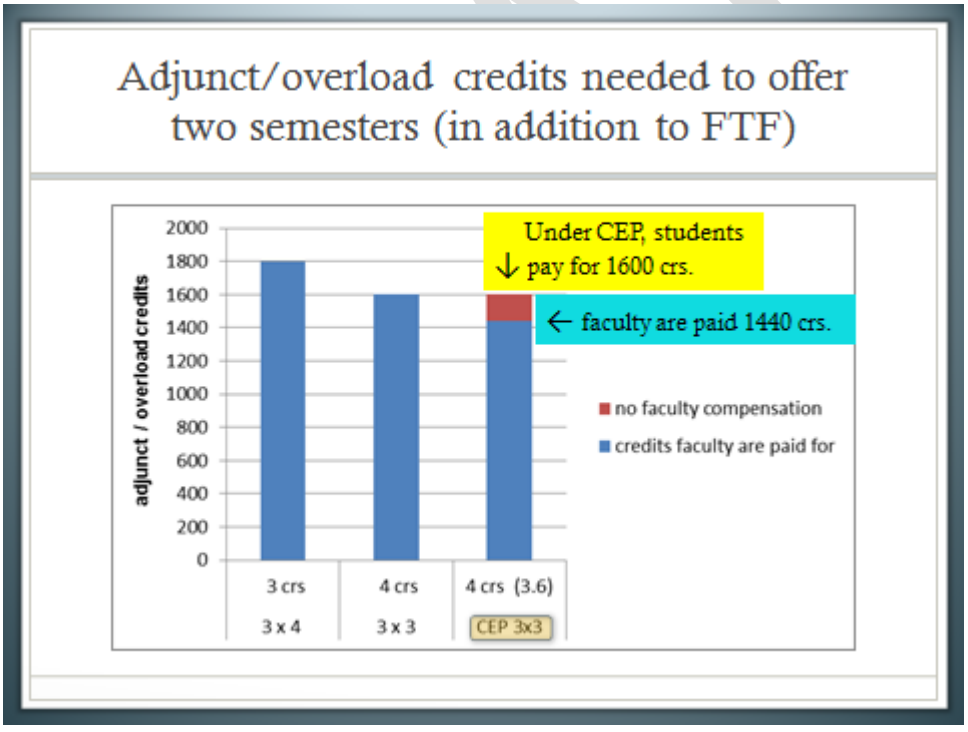

Figure X1. Adjunct/overload credits needed (in addition to FTF) to offer two semesters of courses (based on the assumptions of the model).

Charge B. Transfer credit issues related to our practice of accepting 3-credit courses as equivalent to 4-credit courses

Challenge: Ramapo is part of the Statewide Transfer Agreement Policy. In our current interpretation of it, Ramapo students that transfer credits from institutions with 3-credit courses may be used to fulfill courses in their degree requirements as if the 3 credit course was equivalent to our 4 credit course.

Method: In keeping with our previous work, we researched the practices of The College of New Jersey and Stockton State College. The practices of transfer credit at the former were not available. The policy regarding transfer credit at Stockton State College is:

> "When a transfer course does not have the same credit value as its closest Stockton equivalent course, the course may still be used to fulfill a specific degree or program requirement. *All aggregate credit requirements must be met*." (emphasis added)

A survey of this problem at other 4-credit institutions showed similar policies.

While the above solves the issue for the transfer of 3 credit courses into the requirements of majors and minors at Ramapo College, it does not address the mismatch of 3-credit courses being accepted as equivalent to the College's 4-credit General Education courses. However, based on the Comprehensive Statewide Transfer Agreement, this issue is something that the College has no control over, as incoming students with Associates degrees cannot be required to take General Education courses. The TF concludes that Ramapo College should focus on cultivating the recommendations of the General Education Task Force II rather than moving to emulate local community colleges.

One possibility to facilitate the successful transfer of students to Ramapo would be the creation of a course for transfer students that mirrors some aspects of the First Year Seminar. This course would not be part of General Education and perhaps be recommended (and not required).

C. The revenue (or lack of revenue) issue created by the current work-load given to science faculty who teach labs

Methods:

There are two dimensions to this charge:

1. teaching credit hours (TCHs) for faculty teaching labs
2. student credit hours (SCHs) assigned to labs

Dimension 1. We studied Article XII (Faculty Responsibilities) of the State Master Contract which covers teaching load. We then researched the practices of The College of New Jersey, Stockton State College and the other State Colleges and Universities. A description of the teaching responsibilities associated with teaching a science course at Ramapo College was developed.

Dimension 2. The number of standard lecture/labs required per science major in TAS was determined. Models were developed to test the impacts of charging tuition for taking a lab. The assessed impacts included the increased number of credits required to fulfill the requirements of one science major requiring 10 lecture/labs (Biology, selected as an example) and the resulting changes in curricular flexibility (i.e. ability for science students to take a minor with no overlap with their major and still graduate within 128 credits) resulting from charging tuition for labs.

Dimension 1: Teaching credit hours (TCHs) for faculty teaching labs

Faculty teaching load is covered under Article XII (Faculty Responsibilities) of the State Master Contract. In Article XII, teaching credit hours are defined as follows:

1. When the number of regularly scheduled average weekly class hours equals the number of student credit hours, teaching credit hours shall equal student credit hours.

2. *When the number of regularly scheduled average weekly class hours is greater than the number of student credit hours, those class meetings typically designated as "laboratories" or "studios" shall be equated on the basis of two-thirds (2/3) of a teaching credit hour for each such class hour* (emphasis added)

A State college may choose to award more than two-thirds of a teaching credit hour for each hour of lab, but not less than that amount. Ramapo College has a long tradition of paying more than 2/3 TCHs per hour of lab. Under the Interim Model, faculty are paid 1 TCH for each hour of lab time. Aside from Ramapo College, all of the other NJ State colleges and universities follow the 2/3 TCH per lab hour model set by the Master Contract. The current national practice for lecture/labs is that faculty compensation is typically less than 1 TCH for each hour of weekly lab meeting time.

Lecture/lab models at Ramapo College

Standard lec/lab model
- lecture component (meeting for 3 or 4 SCHs)
- separate lab component (meeting ≤ lecture time)
- total of 8 TCHs required

Integrated lec/lab model
- lecture & lab combined (meeting 4 SCHs)
- total of 4 TCHs required
  - Note: this model only covers 50% of the material taught in the standard lecture/lab model

Teaching a science laboratory at Ramapo College requires the following:

1. Each lab meeting needs to be well planned and tested;
2. Each lab meeting must be set up (prepped) and taken down;
3. Labs often have a lecture component;
4. Each lab requires a fully engaged teaching process;
5. Faculty instruct students on how to write lab reports
6. Faculty grade and provide feedback on lab reports;
7. Lab courses typically have exams.

In addition, the science labs at Ramapo College embody 'High-Impact Educational Practices' as defined by the **Association of American Colleges & Universities**. These include: Collaborative Assignments and Projects, Undergraduate Research, and Writing Intensive status.

The TF concludes that teaching science laboratories at Ramapo College unequivocally requires at least as much 'work' as teaching lectures. Faculty compensation for teaching labs should be equivalent to that paid for teaching lectures (i.e. 1 TCH per hour of class meeting time per week). It is not ethical to reduce faculty compensation in order to help defray the cost of 'phantom credits' (see section on 'Dimension 2' below) that are associated with students being charged no tuition (or reduced tuition) for the lab component of a lecture/lab course.

Dimension 2. Student credit hours (SCHs) assigned to labs

The current national standard for lecture/labs is that SCHs assigned to standard lecture/labs are less than the TCHs required to offer the course. Thus the TCHs required to teach a lec/lab are not fully covered by tuition. Students are often charged 0 to 1 SCH for the lab component. TCNJ does not appear to assign SCHs to lab (each lec/lab counts as 'one unit'). Stockton College charges 4 SCHs per lecture and 1 SCH per lab (5 SCHs total).

The model used predict the impact of charging tuition for taking a lab is provided in Appendix A. Figure C1 shows that the flat rate tuition nullifies up to 16 SCHs gained by assigning SCHS to labs for full time students (FTS). No net gain in tuition dollars FTS is seen by charging 1 SCH lab, and charging 2 SCHs per lab would only net 4 SCHs per biology student who takes 10

lec/lab over eight semesters. Charging 4 SCHs lab would result in a net gain of 24 SCHs based on one student taking 10 lec/labs over 8 semesters.

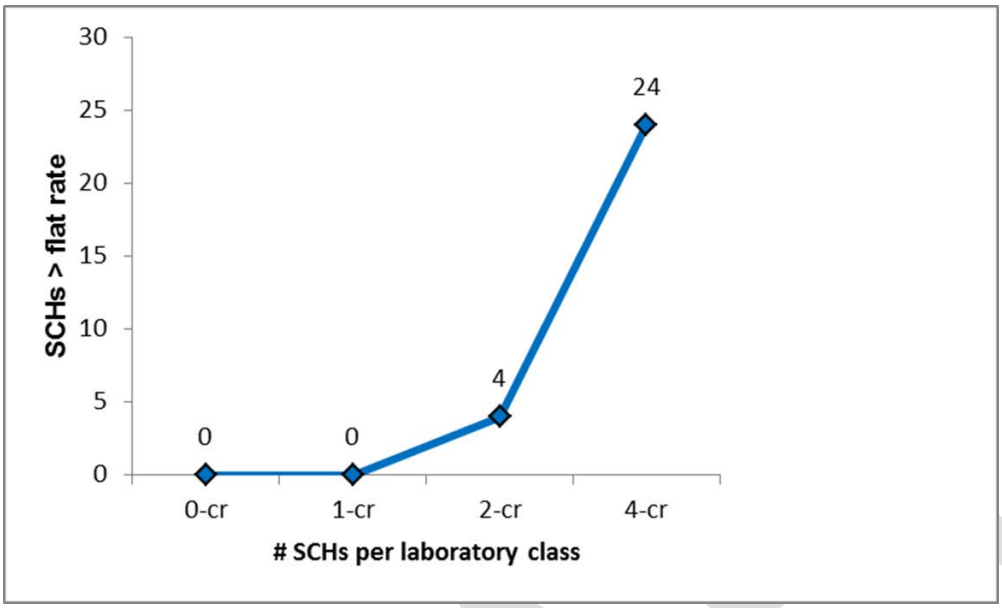

Figure C1. SCHs generated by charging 1-4 SCHs per lab for one student fulfilling the 10 lec/labs required by the Biology major over eight semesters (based on the model described in Appendix A). The flat rate tuition (12-18 SCHs) is included in these calculations.

When one factors in academic flexibility (Figure C2), it can be seen that assigning 0 and 1 SCHs per lab would provide a Biology student sufficient academic flexibility to complete a minor having no overlap with his or her Biology major. Assigning two or more SCHs to each lab would diminish academic flexibility to the point that taking a minor that featured no overlap with the Biology major would not be possible without exceeding 128 credits. Finally, charging 4 SCHs per lab would force a Biology student to take 132 SCHs to graduate (exceeding the 128 SCH graduation requirement).

Charging tuition for labs also has the potential for having significantly negative impact on the 'four-year' plans of science programs. Some science programs require students to take two lecture/labs a semester, and this may occur over several semesters, particularly in the first two or three years. Assigning 1 SCH per lab would not disrupt the 'four-year' plans of these science programs because students would be to take two lecture/labs as well as two lecture courses each semester (a total of 18 SCHs). However, assigning 2 or more SCHs per lab would mean that students could only take two lecture/labs and one 4-credit course a semester (instead of the typical 4 courses) and stay within 18 credits. Thus many science students would only be taking three courses each semester for the first one, two, or even three years (assuming that they did not take overloads). This means that many science students would 1) take many Gen Ed courses late on their academic careers; 2) delay taking required science courses (which may result in taking more than four years to graduate); 3) take overloads; and/or 4) take courses in summer and winter sessions. Many prospective science students may choose to attend other academic institutions the tuition for labs was 2 or more SCHs.

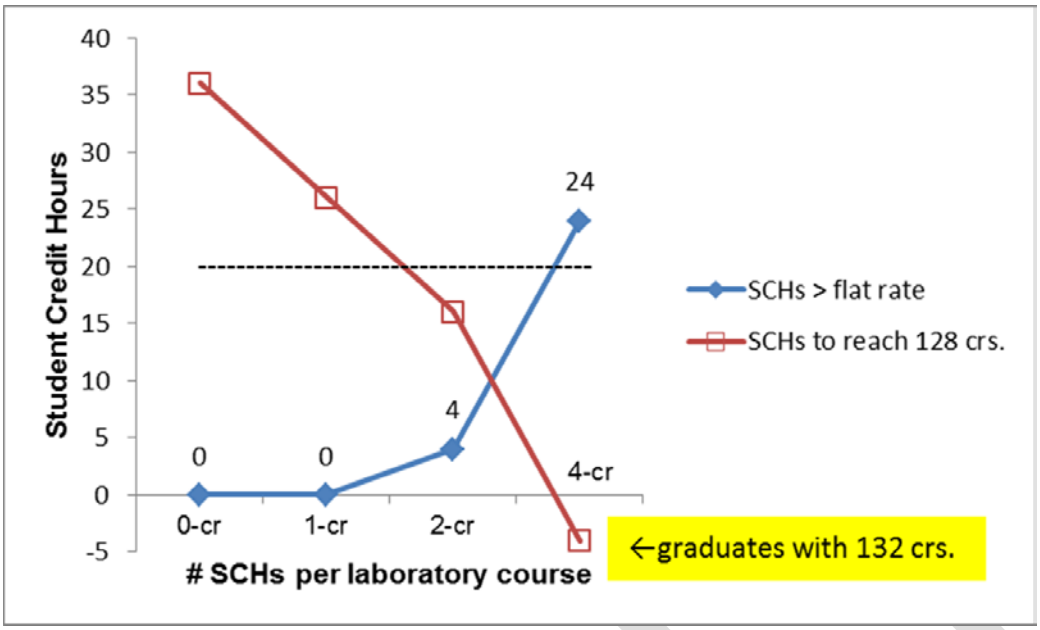

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Figure C2. SCHs allowing for academic flexibility (red line) resulting from assigning 0-1 SCHs per lab for one student fulfilling the 10 lecture/labs required by the Biology major over eight semesters (based on the model described in Appendix A). SCHs generated by charging 1-4 SCHs per lab (blue line) for one student fulfilling the 10 lec/labs required by the Biology major over eight semesters. The horizontal dashed line indicates the number of 'available' SCHs required to fulfill a minor having no overlap with the Biology major.

With the current 'flat rate tuition', assigning 1 SCH per lab would yield little, if any, additional tuition from full-time students.

Although beyond the scope of our charge, the TF presents three options to generate more dollars to help defray the cost of the 'phantom credits' associated with lecture/labs. Each of the three options gains some 8 – 10 SCHs of tuition (or its equivalent).

Option 1: Adjusted flat rate (12-16 SCHs) for FT students taking lec/labs

a) laboratory courses remain at 0 SCHs
b) 'flat rate' tuition for full time students taking a lec/lab in a semester is 12–16 credits.

Justification: students enrolled for 16 crs and taking one lec/lab are getting the equivalent of 20 TCHs of contact time. Setting the flat rate to 16 credits simply reflects the cost of the 'phantom' TCHs associated with teaching laboratories.

Model testing Option 1

Assumptions:

- calculated on a per student basis
- student is full time student for four years at Ramapo
- at least one lecture/lab is taken each semester
- student averages 17 credits per/term

Outcome: a net gain of 8 SCHs of tuition

Option 2: 'flat rate' 12 – 16 credits for all FT students

a) One SCH assigned per lab
b) 'flat rate' tuition for full time students taking a lec/lab in a given semester set to 12─16 credits
c) The equivalent of 2 SCHs of 'Conditioning' classes would be free to all full-time students and carry no academic credit.

Model testing Option 2

Assumptions:

- calculated on a per student basis
- biology student is full time for four years at Ramapo
- 10 lec/labs are taken

Outcome: a net gain of 10 SCHs

Option 3: Science Course fee

a) Charge a 'Science Course" fee for each science course taken in majors having standard lecture/labs.
b) Keep current 'flat rate' tuition
c) No SCHs assigned to labs

Model testing Option 3

Assumptions:

- calculated on a per student basis
- biology student: full time for four years at Ramapo
- student takes 14 science courses
- $150 Science course fee per science course

Net gain: $2100 in fees (≈ tuition for 8 SCHs [$270 for In-State residents])

A note on 'production' courses in CA

CA's 'studio' courses are 'integrated lecture/studio' courses which we will refer to as 'production' courses. They have a unique course structure developed at the founding of the college by President George Potter and CA faculty to teach in a liberal arts curriculum. Production courses combine theory, craft, and creative activity in a single course, unlike 'studio' courses in other BFA institutions, which are segregated by activity (theory, history, technical production, critique, etc.).

The 'production courses' offered by CA are unique by discipline (journalism, design, film, visual arts, theater, music) but share certain common characteristics that teach students about the concepts and their application to practice as well as framework for producing expressive work. These characteristics include:

Readings, lectures, discussions, and short writing assignments explore history and current practice of the discipline as well as familiarize students with the vocabulary and language of that discipline;

Technical skills are taught as a means to an end, just as typing or word processing is taught as a part of the writing process, not as an end in and of itself;

Students' creative work is discussed in critique to give students insight into how to improve their practice, presentation, and critical analysis of the work being produced to understand how well they have been able to apply theory and technique to their work.

Assignments are tied to specific learning objectives and outcomes:

- Critical reading and writing
- Technical assignments
- Creative assignments

Class time is spent:

- Lecturing
- Discussing creative work
- Applying technical concepts to expressive work
- Doing group work

The amount of work involved in teaching production courses is comparable to that required for teaching a lecture. In addition, the number of regularly scheduled average weekly class hours for production courses equals the number of SCHs. Thus, in this case, TCHs should equal SCHs according to the State Master Contract and Ramapo College has historically followed this practice.

Charge D. The perceived inequities in current (and potentially future) teaching load

Method**.** The full time teaching load for tenure track faculty in the current curricular structure is six courses each academic year. Prior curricular structures resulted in unbalanced teaching loads, with faculty members teaching 6 to 8 courses per year.

One significant potential for inequity in teaching load would be moving to a 2/3 compensation model for faculty teaching labs. This would result in a significant inequality in teaching load, with faculty who teach labs having to teach more than six courses each year. For more information related to this topic, see the narrative for Charge C.

Charge E. Scheduling and space issues created by one and two day a week classes

Method: The 2013 Space Planning & Programming Report by Rickes Associates, Inc. was studied to determine the extent of scheduling and space issues

Assumptions of the 2013 Space Planning & Programming Report by Rickes Associates, Inc.

- Assessments of space use and need for space were made for three scenarios:
  current (existing) space use and need based on Fall 2011 data
  near-term projected space use and need (assumed to be 2016)
  long-term projected space use and need (2021)
- Undergraduate enrollment does not change across the three scenarios
- Graduate enrollment increases across scenarios:
  near-term: increase of 250 FTE & long-term: increase of 500 FTE
- Projected long-term (by 2021) personnel increases
  (Table on page IV of Executive Summary; table on page of Chapter 4)
  full time personnel: 192
  part time staff: 6
  adjuncts: 30 (30% over 2011 levels – needed to cover grad courses)
- Residence space was excluded

Projected increases in personnel by 2021 were obtained from each of Ramapo's four administrative areas (the Provost, the Chief Planning Officer, the Vice President for Institutional Advancement, and the President). The projections were (including part and full time):

President: increase of 5 personnel (from 8 to 13; Chapter 6: p. 10)
Provost and VPAA: increase of 226 personnel (from 818 to 1044; Chapter 6 p. 12)
Chief Planning Officer: increase of 23 personnel (from 179 to 202; Chapter 6: p. 14)
VP Institutional Advancement: increase of 5 personnel (from 24 to 29; Chapter 6: p. 15)

According to Provost Barnett, the projected increase in personnel were hypothetical estimates of total personnel needed assuming that there was unlimited funding, not actual estimates of lines to be added. Thus the 2013 Space Report's projections the overall need for space in the near-term (by 2016) and long-term (by 2021) should be ignored, particularly in terms of office space.

Based on current (i.e. 2011) needs and usage, the report concluded that, with the exception of general purpose classrooms (lecture rooms), all campus space categories currently lacked sufficient space. Offices had the greatest need for additional space, both currently and in the future. The report recommended a reduction in the number of general purpose classrooms:

> "A total of 51 general purpose classrooms are recommended, or seven fewer than the 58 that currently exist." (Chapter 5: p. 16)

Based on data for Fall 2011 (provided by 2013 Space Report), the number of classes scheduled across the week shows a markedly unbalanced pattern. Monday and Thursday have the highest density of class meetings, with roughly equal numbers of classes held on each day (Figure E-1). The number of class meeting Tuesday and Friday are lower, with a notable drop in class meetings of Friday (Figure E-1). Wednesday, which is the major meeting day for the college has a much reduced number of class meetings compared to the other four days (Figure E-1). The current scheduling is clearly unbalanced. A more balanced schedule of courses would allow for a more efficient use of general purpose classrooms as well as increasing the perception of how often they were used.

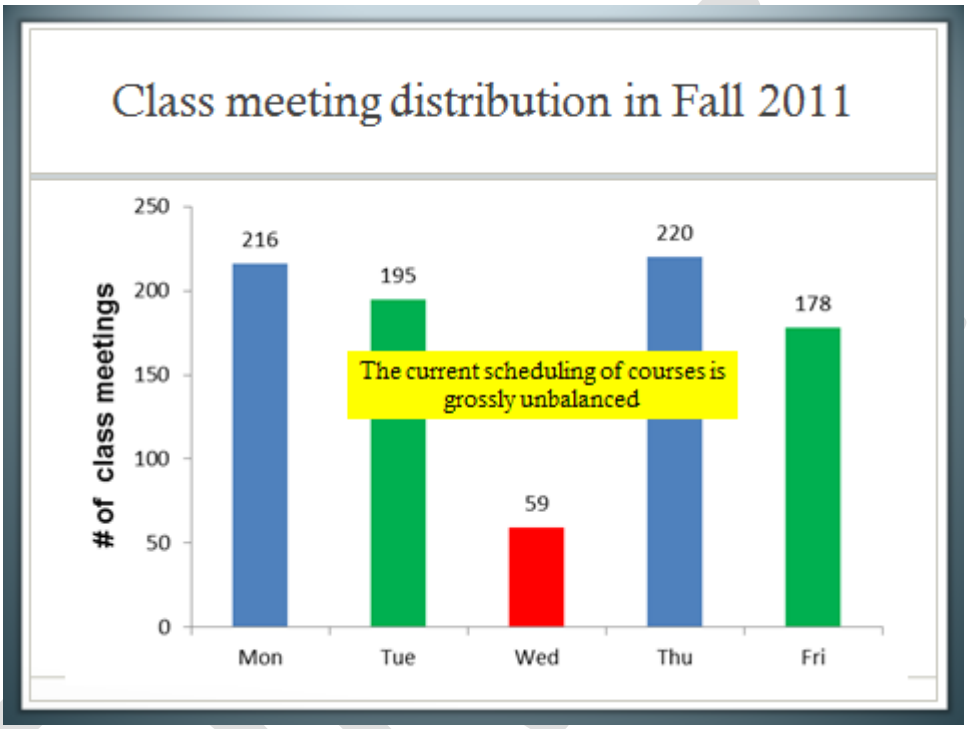

Figure E1. The distribution on the number of classes meeting on the five week days in Fall 2011.

The report concludes that offices currently had the greatest need for more space, both now and in the long term. However, we question the estimates for the projected need for office space in the long term, which is based on a projected 192 additional full time personnel by 2021. As noted by the Provost (see above), however, this increase in personnel is essentially a "wish list' and not an actual estimate in increase personnel. Thus the projected need for office space in the near-term and long-term greatly exceeds what will actually be required. And this inflation of the need for more office space in turn puts artificial pressure on streamlining the use of general purpose classrooms. Thus the TF recommends that the Space report's conclusions about space needs in the near-term and long-term need to be revisited. particularly in terms of projections about the need for office space.

In addition, the adoption of a new curricular model will likely alter the utilization pattern of general-purpose classroom space. Thus the Space report's conclusions about the need for general

classroom space will no longer hold. The TF recommends that the need for general purpose classrooms be reassessed once the new curricular model has been implemented prior to any decision being made about changing the number general purpose classrooms on campus.

Charge F. Appropriateness of class scheduling for facilitation of student learning, particularly in 100 and 200 level classes

Method: The TF first took an informal survey of our units to see if the faculty perceived a pedagogical need for thrice a week classes. (Currently this is only available for lec/lab courses.) A small minority of faculty felt this was a pressing pedagogical need. Most faculty felt the current schedule of Ramapo's classes was not an impediment to pedagogy.
Next, the TF looked to educational scholarship. While there is actually a great discussion of scheduling (also called time tabling) at the secondary level, there is not much discussion at the level of higher education. To quote Duncan Hill, one scholar who has studied college and university time tabling:

> "A search through existing literature about tackling the problems presented by course scheduling reveals a great deal of work in the areas of mathematics and computer science. This work has been of great value as it has provided the groundwork for the development of automated course-scheduling software that is typically used by university timetabling officers. What these approaches do not address, however, are the nature and types of constraints that limit the flexibility of a course timetable. In fact, in a search through the ERIC (Educational Resources Information Center) database and a general social sciences search on Scholar's Portal, I found *almost no literature dealing with timetabling from an organizational or theoretical perspective*" (Hill 2008, italics added).

Currently, educational psychology indicates that when college students space their study sessions apart, they have better learning outcomes (Willingham 2002). However, we are not aware of any body of evidence connecting how often college classes meet with student learning. Distributed practice (spaced repetition, spaced practice) pedagogies can be applied to classes meeting once, twice, or thrice each week. Thus the hypothesis implied in charge F (that students will learn more effectively if they do not take courses in a block (once a week), but instead meet for shorter duration classes of twice or thrice a week) is not supported.

However, in more general considerations of scheduling, the paramount importance of flexibility is emphasized by several authors in different sorts of studies. This flexibility includes: when classes are scheduled to meet; how often; in online or in person or hybrid formats; in compressed or traditional schedules. Another important aspect of flexibility is the *pedagogical flexibility* of the individual faculty member, to use the right teaching techniques in the right ways (so that a thrice a week class, for example, may require a different pedagogical toolkit than a block class).

Charge G. The perception of low academic rigor and lack of flexibility within the curriculum.

This charge has the following dimensions:

a. perception of low academic rigor
   – GPA
   – student perception of rigor

b. flexibility within the curriculum

G. The perception of low academic rigor – GPA

Method:

The committee sought to answer three main questions: 1) can we identify any systematic pattern in Ramapo's mean and median GPAs over time? 2) are there significant differences in the level and change in GPAs by major? and 3) can positive and negative self-selection drive seemingly "high" average GPAs in specific majors? Although it is impossible to establish any definitive causal link between grades/grade distributions, student learning, and rigor, the data may provide insights about grading norms and trends across the college as well as individual majors.

1. Can we identify any systematic pattern in Ramapo's mean and median GPAs over time?

Fitting an unweighted mean of Ramapo's overall GPA to a time-trend regression indicated a 0.012 increase over the ten-year period. However, two important qualifications should be recognized: First, regression analysis requires a minimum of 30 observations to obtain statistically credible estimates of theoretical parameters. Moreover, the trend becomes insignificant if the first 3 years of the time series are omitted. For these reasons, an inference of a significant and persistent increase in the mean GPA at Ramapo College is not credible. Finally, the nearly invariate coefficient-of-variation (across years), strongly supports the bounded median range noted below.

2. Are there significant differences in the *level* and *change* in the GPA for individual majors?

An examination of the median GPA by major over the 10-year period, suggests a highly "bounded" range of between 3.08 to 3.24. While there is greater variability in GPAs for any individual major in any given year, GPAs are clustered within the median bounds. Furthermore, when the universe of observations are combined into a "pooled" regression model (in order to obtain a statistically credible sample), the results indicate no statistically significant *increase* in GPA points *across* majors for individual years.

	Mean	Std. Dev.	C/V	Median	Max.	Min.
2004	3.10	0.22	0.07	3.08	3.81	2.63
2005	3.11	0.19	0.06	3.10	3.62	2.75
2006	3.13	0.18	0.06	3.13	3.59	2.71
2007	3.13	0.17	0.05	3.13	3.52	2.63
2008	3.19	0.20	0.06	3.23	3.71	2.48
2009	3.19	0.20	0.06	3.19	3.66	2.67
2010	3.25	0.22	0.07	3.24	3.79	2.80
2011	3.22	0.19	0.06	3.21	3.80	2.78
2012	3.20	0.21	0.07	3.18	3.63	2.72
2013	3.16	0.23	0.07	3.19	3.57	2.35
2014	3.19	0.26	0.08	3.17	3.94	2.72

3. Can positive and negative self-selection be impacting average GPAs in specific majors?

The average GPA at Ramapo college from AY 2003-4 through 2013-14 was about 3.15, equivalent to a letter grade slightly above that of a "B." One hypothesis is that there are significant differences between introductory and upper-level course within individual majors. For example, during the Spring 2012 semester, the percentage of grades in the A to B+ range was about 10 percentage points lower in the 6 sections of Corporate Finance I (the introductory course) versus the overall major. In other majors with higher average GPAs (e.g., Chemistry and Biochemistry) a form of "survivorship bias" may explain why only the most motivated students persist in taking upper level courses.

G. The perception of low academic rigor – student perceptions

Method: The TF analyzed data from the National Survey of Student Engagement (NSSE), which includes a variety of measures that speak to student perceptions of academic rigor.

The NSSE includes numerous indicators of student engagement. One cluster of such measures is combined to create what NSSE refers to as a "benchmark." Benchmarks include a combination of indicators, in this case, survey questions, that speak to a particular concept. In this portion of our charge, we look at one benchmark in particular: Level of Academic Challenge.

The TF was provided with summary data that track student perceptions of rigor over time. Data were available for the following years: 2003, 2005, 2006, 2008, 2010, and 2012. To determine whether the number of credits assigned to courses had affected student perceptions of rigor, data were divided into two groups. This was done separately for first-year and senior students.

For first-year students, students who had matriculated prior to the Curriculum Enhancement Plan (CEP) were grouped together (2003 and 2005) as were students who started *after* the College switched to all courses consisting of 3.6 credits plus the Curriculum Enrichment Component (CEC; 2006-2012.)

For senior students, we also constructed two groups. Seniors who graduated entirely pre-CEP were group together (2003 and 2005) and those who graduated having only experienced the post-CEP system were group together (2010 and 2012.) To clarify, seniors graduating on a four-year schedule in 2010 would have been first-years in 2006, the first year of the CEP's full implementation.

We utilized t-tests to see whether there were statistically significant differences between pre-CEP and post-CEP first-years and seniors. T-tests were selected because the independent variable (pre- vs. post-CEP students) is a dichotomy (2-category variable - nominal level of measurement) and the dependent variable was a ratio-level variable (percentage of students who "often" or "very often" reported that they were challenged academically.)

Please note that the data provided to the TF made no reference to the sampling method utilized to select cases. Only in instances where probability samples are utilized is hypothesis testing using t-tests appropriate. Therefore, we will present both descriptive as well as inferential results. A conservative reading of the data would rely on the descriptive statistics.

Results demonstrate that among both first-year and seniors, no statistically significant difference was detected between pre-CEP and post-CEP students. In fact, the percentage of students reporting that they "often" or "very often" felt challenged academically rose for both groups. Furthermore, if we compare Pre-CEP first-years to Pre-CEP seniors, differences in the

	FY (PRE-CEP)	FY (POST-CEP)	SR (PRE-CEP)	SR (POST-CEP)
Academic Challenge	***53.2 N = 297***	***54.5 N = 1263***	***54.6 N = 235***	***57.8 N = 766***

percentages are not statistically significant, neither are they significant if we compare pre- and post-CEP first-years and seniors. Looking at the descriptives, the difference between post-CEP seniors and first-years increased under the more uniform model, from 54.5% to 57.8%, as compared to 53.2% vs. 54.6%.

We also compared the perceptions of 'Academic Challenge' of first year students to those of seniors over the five NESSE surveys (2003 – 2012). The percentage of seniors who reported that they were challenged academically "often" or "very often" was slightly, but significantly, higher (56.4%) than the percentage of first years students (54.0%) (2-tailed t-test; prob = 0.027).

Individual indicators of the Academic Challenge benchmarks are also available. See the following website for more information: http://nsse.iub.edu/html/engagement_indicators.cfm. It should be noted that the benchmarks and indicators for NSSE changed for the most recent administration in 2014 and do not match perfectly with the benchmarks from the above 2002-2012 data. The two comparison groups of institutions for the following analyses are Mid-East Public Colleges, and other schools in our Carnegie Class (Master's-Medium.)

Among first-year students, the following items have significantly higher means (i.e. indicate more rigor) and effect sizes greater than 0.3 (which NSSE asserts is a meaningful result.) Associated benchmarks are noted where applicable.

- Wrote papers up to 5 pages
- Wrote papers between 6 and 10 pages
- Total estimated number of assigned pages of student writing

Other indicators of rigor were also higher for Ramapo College first-years relative to other groups of schools, but the effect sizes were not as large (and, therefore, may not be meaningful.)

- Coursework emphasizes: Evaluating sources of information (Higher Order Learning)
- Coursework emphasizes: Forming a new idea from various pieces of information (Higher Order Learning)
- Connected learning to societal problems or issues (Integrated Learning)
- Included diverse perspectives in course discussions or assignments (Integrated Learning)
- Wrote papers 11 pages or more

Among first-years, only one Academic Challenge item was significantly lower than comparison groups (but the effect size was small.)

- Applying facts, theories or methods to practical problems or new situations (Higher Order Learning)

The picture for seniors is less clearcut. Some indicators of rigor are significantly higher than the comparison groups of schools. However, none of the effect sizes are greater than 0.3 (indicating a meaningful result.) Applicable benchmarks are noted.

- Wrote papers up to 5 pages
- Wrote papers between 6 and 10 pages
- Estimated number of assigned pages of student writing
- Percentage of course preparation spent on assigned readings
- Connected learning to societal problems or issues (Integrated Learning)

- Included diverse perspectives in course discussions or assignments (Integrated Learning)

However, other indicators of Academic Challenge do have both lower means and meaningful effect sizes.

- Institution emphasizes spending significant amounts of time studying and on academic work
- Time spent preparing for class

Other measures of Academic Challenge have consistently lower means, but small effect sizes.

- Developed skills analyzing numeric or statistical information
- Reached conclusions based on your own analysis of numerical information (Quantitative Reasoning)
- Used numerical information to examine a real-world problem or issue (Quantitative Reasoning)

It is somewhat difficult to reconcile student reports of being assigned above average amounts of material with their perception that the institution doesn't emphasize time spent on work. Nevertheless, there appears to be a need to address perceptions of rigor among seniors. Also evident is the need for upper-level students to be exposed to opportunities to practice quantitative reasoning, regardless of discipline.

Recommendation: We conclude that switching from a mix of 3 and 4-credit classes to a uniform 3.6-credit model with CEC did not harm students' perceptions of the rigor of courses, and may even have created a very slight increase in perceived rigor; both from pre- to post-CEP and between first-year and senior students. We extrapolate from the above, albeit very limited, data that student perceptions of rigor are not strongly related to credit hours, but may be related to more time spent in the classroom. Therefore, we recommend that the College transition to a full 4-credit hour model as it is beneficial in already mentioned aspects, and is unlikely to lower perceptions of rigor among students.

Based on the 2014 NSSE data, first-years students at Ramapo College, on average, perceive that their courses are more rigorous along a number of dimensions, relative to students at peer institutions. Seniors report being assigned many writing assignments, but this does not appear to inform their perception of an institutional focus on rigorous coursework. Focus groups with senior students may be one way to further understand these results so that appropriate interventions can be suggested.

With respect to increasing perceptions of rigor among Ramapo College students, it is recommended that NSSE data be looked at very carefully. Training for faculty should focus on pedagogical strategies that speak to indicators that may actually need improvement, rather than a

wholesale focus on "increased rigor." In addition, programmatic assessment cycles could be utilized to determine whether syllabi list assignments that are in line with the descriptions for course levels (100, 200, etc…)

G. Lack of flexibility within the curriculum

Moving to the CEP model resulted in a notably significant rise in the percent of students taking one minor ($p < 0.001$) and a slight, but significant ($p = 0.002$) increase in the percent of students taking two minors (Figure G1). There was no significant change in the percent of graduates taking two majors. As this change was present at the end of the first year that CEP was implemented (Figure G1), it indicates that students who graduated with only one year of exposure to CEP were significantly influenced by the new curricular structure. The increase in students taking minors under the CEP model is largely due to the decrease in the number of courses required by minors that was associated with the adoption of the CEP model. Thus TF concludes that, rather than reducing lack of flexibility, the move to the CEP model resulted in increased flexibility in the curriculum.

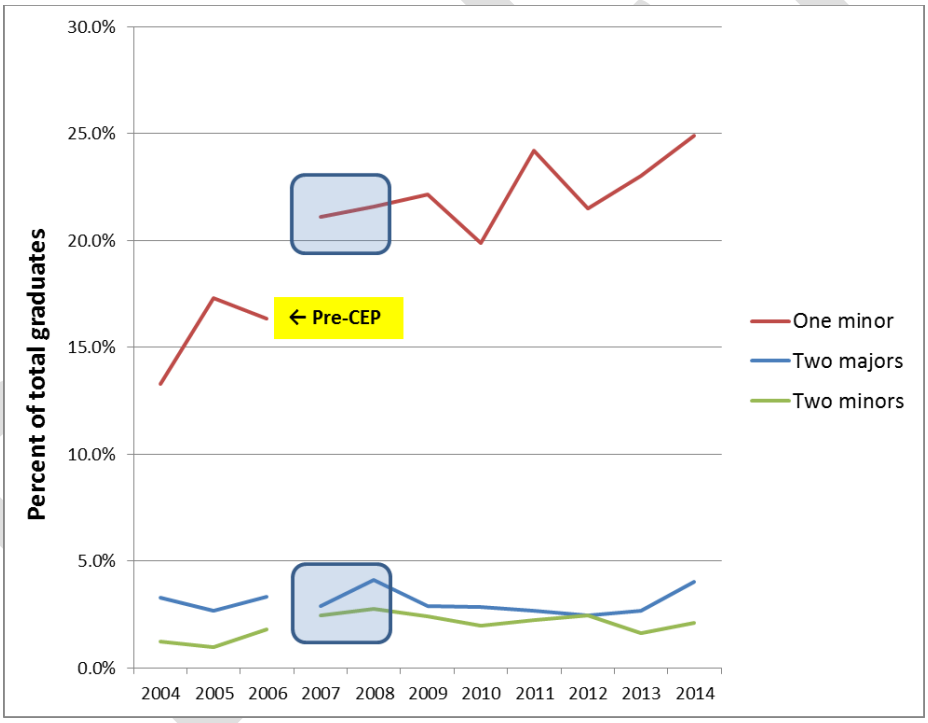

Figure G1. The percent of total Ramapo graduates per year taking one minor, two minors, or two majors at Ramapo College (2004–2014). The shaded areas represent a period when graduates had taken at least two years of courses in the pre-CEP curricular structure.

Charge H. The low level of academic engagement demonstrated by our students

Method: The TF analyzed data from the National Survey of Student Engagement (NSSE), which includes a variety of measures that speak to student perceptions of academic engagement along a number of dimensions.

Charge G speaks to the NSSE benchmark for Academic Challenge, so we will not reiterate those results here, but will focus on the remaining benchmarks, which include: Active and Collaborative Learning, Student-Faculty Interaction, Enriching Educational Experiences, and Supportive Campus Environment.

The TF was provided with summary data that track student perceptions of rigor over time. Data were available for the following years: 2003, 2005, 2006, 2008, 2010, and 2012. To determine whether the number of credits assigned to courses had affected student perceptions of rigor, data were divided into two groups. This was done separately for first-year and senior students.

For first-year students, students who had matriculated prior to the Curriculum Enhancement Plan (CEP) were grouped together (2003 and 2005) as were students who started *after* the College switched to all courses consisting of 3.6 credits plus the Curriculum Enrichment Component (CEC; 2006-2012.)

For senior students, we also constructed two groups. Seniors who graduated entirely pre-CEP were group together (2003 and 2005) and those who graduated having only experienced the post-CEP system were group together (2010 and 2012.) To clarify, seniors graduating on a four-year schedule in 2010 would have been first-years in 2006, the first year of the CEP's full implementation.

We utilized t-tests to see whether there were statistically significant differences between pre-CEP and post-CEP first-years and seniors. T-tests were selected because the independent variable (pre- vs. post-CEP students) is a dichotomy (2-category variable - nominal level of measurement) and the dependent variable was a ratio-level variable (percentage of students who "often" or "very often" reported that they were challenged academically.)

Please note that the data provided to the TF made no reference to the sampling method utilized to select cases. Only in instances where probability samples are utilized is hypothesis testing using t-tests appropriate. Therefore, we will present both descriptive as well as inferential results. A conservative reading of the data would rely on the descriptive statistics. Based on t-tests of differences in the proportions pre- and post-CEP, no statistically significant changes for first-year students in any of the engagement indicators were detected. The percentage of students who

	FY (PRE-CEP)	FY (POST-CEP)	SR (PRE-CEP)	SR (POST-CEP)
Active Learning	***40.8 N = 300***	***43.4 N = 1354***	***44.4 N = 240***	***51.8 N = 807***
Faculty Interaction	***37.9 N = 298***	***39.4 N = 1299***	***41.1 N = 239***	***47.1 N = 785***
Enriching Experiences	***26.4 N = 173***	***25.7 N = 1228***	***36.4 N = 109***	***40.2 N = 749***
Supportive Environment	***60.3 N = 293***	***59.9 N = 1216***	***54.5 N = 236***	***57.0 N = 739***

reported that their coursework included Enriching Education Experiences "often" or "very often" dropped very slightly (-0.7 percentage points), as did the percentage for Supportive Environment (-0.4 percentage points.)

In summary, post-CEP benchmarks for engagement remind relatively unchanged relative to pre-CEP levels for first-year students.

Among Seniors, the increase in perceived Active and Collaborative Learning was statistically significant (in both 1 and 2-tailed tests.) On all of the benchmarks, descriptive percentages increased after the change to 3.6 credit courses plus the course enrichment component, indicating that senior student engagement benefitted somewhat from the changes that were implemented.

The perception of academic engagement among Ramapo seniors was significantly higher than it was among first year students based on the 2003 – 2012 NSSE data. Perceived 'Active and Collaborative Learning' was significantly higher among seniors (48.6%) than in first year students (42.5%) [2-tailed t-test; $p = 0.0006$]. A significantly higher percentage of seniors (40.1%) also reported 'Enriching Educational Experiences' than did first year students (25.8%) [2-tailed t-test; $p < 0.0001$].

Individual indicators of the Academic Engagement benchmarks are also available. See the following website for more information: http://nsse.iub.edu/html/engagement_indicators.cfm. It should be noted that the benchmarks and indicators for NSSE changed for the most recent administration in 2014 and do not match perfectly with the benchmarks from the above 2002-2012 data. The new benchmarks are as follows: Learning with Peers, Experiences with Faculty, and Campus Environment. The two comparison groups of institutions are Mid-East Public Colleges, and other schools in our Carnegie Class (Master's-Medium.)

The most recent NSSE data (2014) provide a mixed picture of students' perceptions of academic engagement. Among first-year students, two measures were found to be statistically higher than comparison groups *and* have meaningful effect sizes. They do not appear to be tied to a particular benchmark in the 2014 NSSE.

- Gave a course presentation
- Course included a community-based project

Other items were found to have lower means than comparable institutions, but the effect sizes were small, and therefore may not be meaningful. Benchmarks are noted if the measure is tied to one.

- Plans to study abroad
- Institution provided support for your overall well-being, e.g. recreation, health care, counseling, etc. (Supportive Campus Environment)

Asked another student to help you understand course material (Learning with Peers)

Prepared for exams with other students (Learning with Peers)

Not all literature on student learning in higher education agrees that studying with peers is beneficial. For instance, Arum and Roksa (2011) found in their book, Academically Adrift: Limited Learning on College Campuses, that students who studied with other more often actually scored less well on the Collegiate Leaning Assessment (CLA).

Among seniors, the following measures were found to be statistically higher than comparison groups *and* have meaningful effect sizes (greater than 0.3). Under the new NSSE, these do not appear to speak to particular benchmarks, but many reflect high impact pedagogical practices as specified by the AAC&U.

- Gave a course presentation
- Courses include a community-based project
- Participate in an internship, co-op, field experience, student teaching, or clinical placement
- Complete a culminating senior experience - e.g. capstone

- Hold a formal leadership role in a student organization
- Participating in co-curricular activities

Additional items also produced significantly higher means, but with smaller effect sizes.

- Talked about career plans with a faculty member (Experiences with Faculty)
- Discussed course topics with a faculty member outside of class (Experiences with Faculty)
- Discussed academic performance with faculty member (Experiences with Faculty)
- Attending events that address important social/economic/political issues (Supportive Campus Environment)

The next group of indicators is also derived from senior student data, and produced significantly lower means with meaningful effect sizes. Both measure the Supportive Campus Environment benchmark.

- Quality of interactions with academic advisors (Supportive Campus Environment)
- Quality of interactions with other administrative staff and offices, e.g. registrar, financial aid, etc. (Supportive Campus Environment)

Finally, also lower but with a small effect size is this measure of senior engagement.

- Institution provides support for your overall well-being, e.g. recreation, health care, counseling, etc. (Supportive Campus Environment).

I. Addendum

In the process of making our decision about 4-credit courses in the context of the current 128 credit requirement for graduation, the TF also explored the suitability of 4-credit courses for a 120 credit requirement for graduation. Our conclusion is that 4-credit courses would also be the preferred option for the latter. Our rational is provided below.

The primary advantage of 3-credit courses and a 120 credit graduation requirement is that students would be taking a higher number of courses (40 3-credit courses vs 30 4-credit courses). But the many advantages of 4-credit courses when used in the context of a 120 credit graduation requirement far outweigh the greater multitude of courses associated with 3-credit courses.. Some of the many advantages of 4-credits are listed below.

1. Many 'high impact' teaching practices require the extra time allowed by 4–credit courses.

2. By taking four 4-credit courses each semester, students would only be two courses short of graduation by the end of their seventh semester. Thus a student could graduate by the end of their seventh semester if she/he had either transferred in two AP courses or had taken two courses in summer or winter sessions.

3. In light of the above, education students could do their student teaching in their eighth semester and thus graduate in four years.

4. Students could take three courses in one (or even two) semesters and still graduate in four years. This would allow for the possibility of a reduced load, for whatever reason, without impeding significantly impeding a student's progress to graduation.

5. The cost of buying texts for four courses would generally be lower than buying texts for five courses

6. Having four courses each semester would allow students to more fully focus on, and understand, the topics they study.

Appendix A. Model to test income from assigning SCHs to laboratory classes

- calculated on a 'per student' basis
- based on current requirements for Gen Ed & Biology (this requires 10 lec/lab courses)
- student spends four years as a full time student at Ramapo College
- 'flat rate' tuition for full timers: 12-18 credits
- 64 SCHs to fulfill Biology requirements
- with double counting, 28 SCHs to fulfill Gen Ed
- with double counting, 0 SCHs to fulfill TAS core

This sums to 92 SCHs, leaving 36 SCHs open for minors, etc. However Flat rate tuition covers 2 SCHs beyond 16 SCHs ─ over 8 semesters that amounts to 16 'free' SCHs

By assigning 1 SCH per lab, 10 SCHs would be gained by one full time Biology student taking 10 labs over 8 semesters.

16 'free" SCHS - 10 lab SCHs = no increase in tuition by assigning 1 SCH per lab.

Appendix B: A brief review of scholarship on 3 and 4 credit classes

We reviewed the past decade of higher education scholarship to find if 3 or 4 credit classes have particular costs or benefits.

In the past ten years, most of the research seems focused on distance and e-learning and how to ensure that courses offered in those media are comparable to traditional courses. There was no sustained discussion of "3 versus 4 credits."

Presently, the discourse is about the work of Amy Laitinen, author of *Cracking the Credit Hour,* a 2012 report for the New America Foundation. The entire report can be found here: http://higheredwatch.newamerica.net/sites/newamerica.net/files/policydocs/Cracking_the_Credit_Hour_Sept5_0.pdf

Laitnen argues that the Carnegie credit hour is an outmoded, old fashioned tool that does not measure learning. It is particularly outdated in light of both online education and the spiraling cost of higher education; Laitinen calls the credit hour an "illusion" that we all have collectively agreed to believe because so many policies and habits revolve around it. Laitnen is not alone. The current debate is that rather than measure instructional time, we ought to be measuring learning – and there could be a variety of ways to do that.

Responses to *Cracking the Credit Hour* are quite mixed. The credit hour and its future is now dominating the higher education discussion. The issue of "3 vs. 4 credit" classes appears to be moot. In the short term, we must meet the demands of the accreditation. In the long term, Ramapo might need to adopt more flexible understandings of instructional hours, as needs be. (Hybrid classes, already on offer, might be a model here. as well as meaningful portfolios for FLEX credit, something already in place.)

Appendix C. References

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Dear Faculty Colleagues,

Please submit any feedback you have to faec@ramapo.edu, no later than noon on Friday February 27th.

Thank you,

Emma Rainforth
President, Faculty Assembly