Degree Mapping Guidelines: A Toolkit

CUNY Degree Mapping Working Group
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Preface

CUNY’s students face many challenges on the road to graduation, and one of the most significant is the complexity of choosing courses that will allow them to graduate on time. They must be supported by a small army—both visible (faculty and staff advisors in particular) and those in the background (scribers, coders, registrars, and other administrators who ensure that degree requirements are transparent and can actually be accomplished in the prescribed number of semesters).

This Toolkit is therefore designed to serve a variety of audiences: the faculty who define requirements by discipline, the staff and faculty who help ensure these requirements are communicated clearly and consistently to all students throughout their time at CUNY, the IT professionals who customize Ellucian DegreeWorks and other systems to these requirements, and last but not least, the provosts and executives who commit the human resources to ensure that requirements are carefully defined and effectively communicated, both through degree audit technologies and more traditional channels.

DegreeWorks and other tools in the service of CUNY’s Academic Momentum Campaign, like most complex systems, are works in progress. However, ensuring that all degree programs have degree maps—and that existing degree maps have been audited—cannot wait. The goals of identifying hidden prerequisites, diagnosing bottlenecks in the supply of needed courses, and understanding which remediation courses have become de facto requirements can only be accomplished by faculty and staff with direct understanding of their curricula and their students. Moreover, even after all degree maps are complete, this intensive initial phase must be followed by periodic assessments to ensure that they evolve in tandem with students and the education offered to them.

Finally, as technologies such as DegreeWorks become increasingly valuable tools for advisors, conventional communication tools—in the form of bulletins, academic program worksheets, departmental brochures, and especially departmental websites—must be aligned with each change to ensure that the information at students’ fingertips is consistent with more specialized resources at the advisors’ disposal. This sustained attention will help ensure that CUNY can hold up its end of the bargain to students who resolve to complete their degrees on time.

This Toolkit is an evolving, rather than static, document to support those who tirelessly work for their students. We welcome feedback from all CUNY colleagues to continue improving its utility.

November 2018

CUNY Degree Mapping Working Group
# TABLE OF CONTENTS

## I. INTRODUCTION
- The Case for Degree Maps
- Current Obstacles to Student Success
- What are Degree Maps?
- Guiding Principles
- Required CUNY Criteria and Components
- Considerations for Developing Degree Maps
- ADA Compliance

## II. CURRICULAR ISSUES
- Getting on the Path: Meta Majors
- Implementation of Meta Majors
- Hidden Prerequisites
- Early Proactive Advisement and Alignment of Career Plans

## III. CAMPUS STRUCTURES, PROCESSES, AND MAJOR PLAYERS
- Roles and Work Flow
  - Faculty and Advisors
  - College Registrars
  - Timelines: Approvals from CUNY Board of Trustees and NYSED

## IV. TECHNOLOGY
- Overview of Platforms and Tools at CUNY
  - DegreeWorks
  - DegreeWorks Student Educational Planner (SEP)
  - DegreeWorks System Maintenance and Business Practices
  - The FACTS System
  - Data Integrity in DegreeWorks: Staff and Training
  - LaGuardia Model: Student Educational Planner (SEP) Rollout

## VI. APPENDICES
I. INTRODUCTION

The Case for Degree Maps

The City University of New York (CUNY) is implementing an Academic Momentum Campaign, a comprehensive vision and set of strategies that will result in greater success for students. CUNY’s Academic Momentum Campaign is aligned with Complete College America’s (CCA) three strategies of: corequisite support models, credit accumulation (Take 15/30 campaigns), and degree maps with proactive advising.

A key element of the Academic Momentum Campaign is degree mapping. Degree maps are tools that provide students with clear measures and targets to complete their degrees on time. Guided by a semester-by-semester plan of degree requirements, students will understand how prerequisite courses build on each other, when gateway courses should be taken, and how all requirements fit together. When students follow degree maps, they avoid taking unnecessary classes, save time and money, and stay on course for employment after graduation.

Implementing degree maps effectively is complex and requires involvement from many stakeholders at the university and college levels, including the registrars, advisors, administration, and faculty. To support the work of the colleges, a CUNY-wide Degree Mapping Working Group was convened to identify best practices, strategies, and tools.

The CUNY-wide Degree Mapping Working Group’s goals are to:

- Identify best practices and establish CUNY-wide standards for degree maps.
- Develop basic criteria and required components of CUNY’s degree maps.
- Provide guidance on using DegreeWorks in support of degree maps.
- Work closely with the Advisement Council, the Council of Registrars, and the DegreeWorks Scribers Council to inform and guide colleges.
- Develop degree mapping/DegreeWorks training strategies, conduct presentations, and assist with developing and sharing training and best practices materials.
- Create and disseminate Degree Mapping Guidelines: A Toolkit (this document).
- Provide ongoing support and assess progress.
Current Obstacles to Student Success

National studies show that providing students with guided, semester-by-semester plans of their degree requirements helps tackle obstacles that impede progress towards degree completion. Current Obstacles to Student Success* include:

- **Taking Unnecessary Credits**: Taking the right courses is critical; otherwise, many credits earned end up not counting towards a degree. On average, CUNY students accumulate more than 128 credits when graduating from baccalaureate programs (2010 cohorts), which is eight extra credits.

- **Excessive Program Requirements**: Many programs require too many hours and credits, costing students a lot of time and money. For example, around 80% of CUNY associate-degree students are assigned to some remediation (2016 cohort) and are required to complete more than 60 hours to graduate. This can be misleading for students. Degree maps should be transparent and incorporate remedial instruction. In other cases, programs include hidden prerequisites that are not clearly identified in the degree requirements and often extend the degree requirements well beyond 60 or 120 credits.

- **Unavailable Courses**: When needed courses are not offered, students get stuck in costly holding patterns. The 2016 CUNY Student Experience Survey shows 34% of senior college students reported not being able to register for a class they wanted in that semester, and nearly half of those saying they could not register for a class required for their degree.

- **Lost Transfer Credits**: Some college and department transfer policies may be still undermining student progress, although the Pathways Initiative (implemented in fall 2013) has contributed to an increased number of credits transferred that fulfill degree requirements.

*Data Source: CUNY Office of Institutional Research and Assessment

What are Degree Maps?

Degree maps are visual, term-by-term representations of the paths students can take toward successful and timely completion of their chosen courses of study. As degree maps are guides, they should be used in conjunction with advisement, the catalog, and degree audits. Degree maps can and should play a key role in proactive course scheduling and planning. (See Appendix B for sample degree maps).

There are required CUNY criteria and components for all CUNY degree maps, but there is no standard or required “CUNY template.” Many CUNY colleges already have degree maps or academic plans for each major, and there is no need to reinvent the wheel. However, all degree maps and plans should
be reviewed and revised according to the Guiding Principles and the Required CUNY Criteria and Components, below.

Guiding Principles

- CUNY’s degree maps can be presented in many forms and formats. There will be no one required CUNY design or template.
- CUNY degree maps incorporate key Academic Momentum strategies such as meta majors, proactive advisement, and early alignment with career plans.
- All degree maps must meet the CUNY required criteria and include the required components.

Required CUNY Criteria and Components

At CUNY, a degree map is required for every degree program and must:

- Present a semester sequence with 30 credits per year so that full-time, first-time students can complete the program in two to four years. (Recommended: additional three- and five-year alternative plans to accommodate remedial and transfer students.)
- Address the needs of transfer students (by creating dynamic degree maps or alternative 60-120 credit maps).
- Include the appropriate gateway math course for the major/meta major.
- Provide a path to complete gateway English and math courses in the first year (first 30 credits).
- Ensure there are no hidden prerequisites.
- Be current with up-to-date program requirements and aligned with the college catalog.
- Be available, public, and easily accessible to students, faculty, and advisors.
- Comply with the Americans with Disabilities Act (ADA).

Considerations for Developing Degree Maps

Best practices for developing degree maps include:

- Create additional degree maps for remedial and transfer students: three- and five-year alternative plans.
- Develop meta majors that include a common math requirement within meta majors.
- Review all degree programs for hidden prerequisites.

November 2018
• Reassess and redesign student onboarding processes and advisement operations.
• Be mindful of timelines for curriculum governance.
• Include a plan for routine updating and maintenance.

(See Appendix C for sample process approaches, including essential elements and steps to build degree maps.)

ADA Compliance

All CUNY degree maps must comply with the Americans with Disabilities Act (ADA).

For additional context, in the last year the Central Office and most CUNY’s colleges were subject to complaints about the inaccessibility of their websites for users with disabilities. CUNY and a number of colleges have entered into Resolution Agreements with the U.S. Department of Education’s Office of Civil Rights, agreeing to make their websites and systems accessible in accordance with the relevant federal law and guidelines. CUNY is not alone in addressing issues of this nature; content accessibility is a prevalent problem at colleges and universities across the country.

There is a new resource for faculty to help ensure that they create course materials in compliance with ADA and standard Web Content Accessibility Guidelines (WCAG). The Blackboard Accessibility Course is a self-paced, online course, created by CUNY faculty, for CUNY faculty. All CUNY faculty and staff can access the course by logging into Blackboard and clicking on a new “Accessibility Training” tab. (See a video developed by CIS for instructions on how to find it in Blackboard.)
II. CURRICULAR ISSUES

Getting on the Path: Meta Majors

What is a Meta Major?

Degree programs can usually be clustered into groups of aligned fields of study or “meta majors.” Some meta majors are grouped by academic discipline such as “social sciences,” “humanities,” or “STEM disciplines.” Others are aligned using a professional categorization such as “allied health” or “business.” Frequently, introductory courses in one program within a meta major are required for another program in the same meta major.

It is not uncommon for students to enter college undecided about their program of study, but even so, with early advisement, students can usually narrow their selection to a meta major (based on career exploration or other interests).

Students who choose a meta major before they register for their first semester can be confident that they are likely taking courses that will count toward their eventual program of study, from their first semester onward. This increases their chances of staying in college as well as completing their degree on time and within the 60-/120-credit limit for most degree programs.
Implementation of Meta Majors

Math Aligned to Majors

It is critical to academic momentum that students enroll and complete the appropriate gateway math course in their first year, even if they have not yet chosen their particular major. Therefore, a key component of a meta major is a common gateway math requirement. Each meta major should have the same math requirement for all programs/degrees within that meta major.

For example, students with a meta major in STEM will be directed to college algebra/precalculus track, while students focusing on non-STEM (e.g., education, business, social sciences) will be directed to quantitative reasoning/statistics.

As part of reviewing existing degree maps and creating new degree maps, faculty should consider how to remedy cases in which the gateway math requirement is not the same within a meta major—to bring these requirements into alignment.

Developing and Implementing Meta Majors

Here are standard practices from the field for developing and implementing the use of meta majors:

1. **If you do not yet have meta majors, consider creating meta majors while you are developing your degree maps.** Because meta majors are so critical to well-designed degree maps, this upfront work will save time in the long run.
2. Ensure that each meta major is linked to a general degree (e.g., Associate of Arts, Associate of Science, Associate of Business, Bachelor of Arts, Bachelor of Science, etc.). From a front-facing standpoint, students are selecting a meta major, but behind the scenes that meta major is directly linked to a financial-aid-eligible degree. This generally means that the degree requirement for the first two semesters are the same for the degrees that fall under that meta major.

3. Create degree maps for the first two semester (30 credits) for each meta major.

<table>
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<tr>
<th>STEM META MAJOR</th>
<th>FIRST-YEAR CORE</th>
<th>TERM 1</th>
<th>TERM 2</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>**English 101</td>
<td>English 101+**</td>
<td>3 credits</td>
</tr>
<tr>
<td></td>
<td>**Pre-calc 101</td>
<td>Pre-calc 101+**</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Biology, Chemistry, or Physics Core w/lab</td>
<td>4</td>
<td>4</td>
</tr>
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</tr>
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<td>Student Success Seminar</td>
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<tr>
<td>CREDITS</td>
<td>15</td>
<td>15</td>
<td></td>
</tr>
</tbody>
</table>

4. If you already have meta majors, check to make sure that the first 15 credits (first semester) across all programs are aligned, within each of the meta majors. If possible—depending on the meta major—try to align the first and second semesters (30 credits). If the first 15/30 credits are not identical across programs within each meta major, conduct a curriculum audit to identify misalignments. Working groups (composed of faculty representing each discipline area, along with advising leads) can then work through the degree maps with a common goal of aligning the first 15/30 credits within meta majors.

5. Ensure that each meta major includes the correct gateway math course and the correct gateway English within the first 30 credits

**Hidden Prerequisites**

Degree maps must not have “hidden” prerequisites, just as majors must not have hidden prerequisites.
Hidden prerequisites are called “hidden” because they are not listed or published as requirements, yet students must have taken the courses or acquired the knowledge in order to progress. Hidden prerequisites are problematic for several reasons:

1. Hidden prerequisites mislead students by misrepresenting how many credits are truly required—and end up adding to the total credits required for a degree. Students wind up paying for (in time and money) more classes than they thought they would have to.

2. Hidden prerequisites make good planning impossible. Students cannot plan for what they do not see or understand as part of their requirements.

3. Hidden prerequisites create financial aid problems. State financial aid programs will not pay for credits that cannot be applied to the published number of credits required to earn the degree. If the published number of required credits is different from the actual number of required credits:
   - Colleges that identify non-counting courses in a student’s registration might not release the appropriate financial aid funds to the student’s account, leaving the student liable for their semester’s tuition bill.
   - Colleges that overlook these non-counting courses and release financial aid funds might be served with large fines from financial aid auditors.

4. Hidden prerequisites violate CUNY policy. The Board of Trustees policy states that colleges can require degree requirements in two areas only: general education (composed of Common Core and College Option) and the major. “Any course or disciplinary area that is required of all students and is not specifically required for a student’s major must fall within the Common Core or College-Option requirements.” CUNY BOT, June, 2011 Item 5M. No other requirements are permitted. Any additional credits required to complete the degree must be elective credits.

Please note that hidden prerequisites can hide behind other names, such as “pre-major requirements.” Any “pre-major requirements” must be clearly listed and have room within the major—unless there is room in the electives category—that would not require the student to go over 60-/120-credits.

Also, although remedial courses are not considered hidden prerequisites, they do add to the time to degree. To accommodate students who enter college with remedial needs, associate-degree granting colleges should consider creating three-year degree maps (that include remedial courses) in addition to two-year degree maps.

(See Appendix D: Hidden Prerequisite Memo from EVC, July 2016.)
Review Degree Programs to Ensure There Are No Hidden Prerequisites

It is important to examine each major/program to determine if there are hidden prerequisites, and to do so periodically to monitor “creep” or “slippage.”

There must be a path for first-semester students to be able to complete a degree within the 60-/120-credit limit, with all requirements falling under two areas only—general education and the major—with any remaining credits as electives. According to CUNY policy, there can be no requirements outside of these two areas. (Please note that there are some exceptions to the 60-/120-credit limit: some programs leading to a professional license or holding a special accreditation and have an approved waiver.)

Faculty, working with advisors, should review their programs/majors to identify any hidden prerequisites. If any are found, faculty would then adjust the program to keep it within 60/120 credits by reducing other requirements to make room for the “revealed” hidden prerequisites.

There may be cases in which it is unclear if a course is a hidden prerequisite—most likely in math, where student placement is key. If, however, the vast majority of entering students place into a course, it de facto becomes a degree requirement and must be clearly listed as such.

Please note that colleges are strongly advised against reducing the credit value of existing required courses in order to free up credits to accommodate hidden prerequisites, as this is in conflict with academic momentum. All solutions should be consistent with existing college academic policies and practices as well as national norms.

Early Proactive Advisement and Alignment of Career Plans

Early and proactive advisement gets students on the right path from day one. Advisement helps students choose the best meta major for them (based on career exploration and goals) and then enroll in the appropriate courses (most critically gateway math and English courses) in that meta major. Therefore, it is important that advisement takes place before students register for courses.

Colleges should examine their onboarding processes to make sure that early, proactive advising is embedded. This review process should involve academic advising leads and front-line advisors, along with faculty and representatives from areas who have an impact or role in first-semester matriculation. Reviewing and re-engineering the student onboarding and advisement process may take time and focused attention, but it is a mission-critical step to a successful momentum campaign.
Our *Complete College America* colleagues in sister institutions report that they redesigned their onboarding process very early in their momentum work. The efforts have proven to be successful in increasing term-to-term and year-to-year persistence—as well as decreasing time to completion and increasing completion rates overall. Data also show gains (reduction in achievement gaps) within these achievement indicators for Pell grant students, African American students, Hispanic students, and others.

Following are standard practices and guidance employed by other academic institutions for reengineering the college onboarding process. Onboarding for first-semester students should include the following before students enroll:

1. Required orientation to the college (can be face-to-face or online).
2. Required academic advising.
3. Required career exploration tied to meta majors, academic programming at the institution, and career outlook data. This can be done with online assessments and/or career coaches/advisors. Assist students with choosing a major through workshops, career centers, and web resources such as the Bureau of Labor Statistics Occupational Outlook Handbook or through software services such as the FOCUS 2 online tool [https://www.focus2career.com/Index.cfm](https://www.focus2career.com/Index.cfm), which helps students explore majors and occupations that match their personal attributes, and plan their academic career.
4. Address math and English placement protocols by providing clear pathways through and out of remediation. Ensure that all advisors are knowledgeable about where to direct students for the most appropriate intervention or course, be it a pre-matriculation USIP intervention over the summer, a developmental sequence, or a corequisite offering. As CUNY’s placement protocols into developmental education change, be sure that students have access to the appropriate developmental supports.

5. Required enrollment in a math and English course in first semester to enforce momentum and ensure that students can complete their gateway English and math during the first year. Even if students are enrolled in a corequisite model or a developmental sequence the first semester, they must not lose momentum from any skills development work completed over the summer.

6. Assign students (by name) to an academic advisor who will be the student’s “go-to expert.”

7. Leverage DegreeWorks, CUNYfirst, Starfish, and other tools to track students through each step of the required matriculation process and provide communication to students on their progress via emails, texts, and calls.
8. Consider requiring a second visit to an academic advisor for all first-semester students, before they finish their first semester. This second visit could focus on: choosing and applying for a major (if needed), monitoring first-semester academic progress and connecting to support services (can be guided by predictive analytics and/or early alerts), and reviewing second semester courses.
III. CAMPUS STRUCTURES, PROCESSES, AND MAJOR PLAYERS

Roles and Work Flow

Each CUNY college already has a team in place to manage and provide oversight of implementing their Academic Momentum Campaign. The teams are composed of key college stakeholders with expertise in relevant areas, including faculty, advisors, registrars, admissions staff, and CIS/IT staff. The creation, review, and maintenance of degree maps requires participation and input from all of these areas.

Faculty and Advisors

The specific responsibilities and workflow of creating degree maps can differ by college. For example, in some cases, the college advisors play a critical role in starting the process by doing the mechanical work of mapping out each degree—and then giving them to the academic departments to review. This approach has several advantages. Advisors become even more knowledgeable about the majors and curriculum. It also fosters strong relationships between advisors and faculty, as they work together to review, amend, and approve the degree maps. In other models, the faculty develop the degree maps at the department level, within each major.

Either way, faculty and academic departments must be actively engaged in the creation and approval of the degree maps. The process forces good planning ahead in terms of courses and scheduling—departments can more clearly determine which courses need to be offered when and for how many students, and degree maps provide students with a “contract of sorts” about what will be available when.

College Registrars

The Office of the Registrar, as the holder of student data, must ensure that timely and accurate information is entered into the student information systems, which feeds DegreeWorks, EAB, and/or Starfish. The registrar should also be involved in degree mapping to inform stakeholders of the implications of degree maps with regard to credit accumulation and graduation rates.

For students to successfully use degree maps, course catalog information—including prerequisites/corequisites, frequency of course offering (fall only, etc.), financial aid eligibility (FACTS), and applicability of course towards degree requirement (DegreeWorks)—must be accurately maintained by the Office of Registrar.
Using the Student Education Planner (SEP) in DegreeWorks, the registrar should develop a more accurate means of collecting course projections over at least a two-year period that can feed a variety of systems to support students and departments with projections and planning. This might also be integrated with university budgeting cycles and include policy and practice changes and technology upgrades/purchase.

Once degree maps are implemented, transfer credit evaluators should provide intentional training, communication, and awareness of the CUNYfirst Transfer Finder feature to admissions, students, advisors, and community college partners.

Registrars, with college governance, should identify any overarching curriculum structures or concepts that are challenging in terms of students’ understanding of the degree audit process. If applicable, college registrars should identify barriers and make recommendations for changes.

**Timelines: Approvals from CUNY Board of Trustees and New York State Education Department**

While the mapping of degree requirements itself does not need approval of the CUNY Board of Trustees, any changes to the curriculum or to individual courses do need Board approval. Changes such as new or removed prerequisites, different math requirements, or a reduction in the number of credits in the major all need to be approved by the Board through the Chancellor’s University Report (CUR), which is generated six times per year. In addition, most changes require multiple levels of college approvals prior to being entered into the CUR. It is therefore imperative to be familiar with the meeting calendars for all levels of college approvals as well as the CUR.

Most CURs are organized by the Office of the Provost. Contact them for their internal deadline for CUR submissions. We suggest that you map out the meeting calendars for all local levels of approval in order to determine for which CUR you are most likely to have a locally approved submission. It is only after the Board meets and approves the CUR that the change is official.

More significant changes (e.g., program name change, new degree award, new concentrations) require the approval of the New York State Education Department, after CUNY Board approval. There are different state forms for academic programs, teacher education programs, and programs leading to other professional licenses. Contact the Office of Undergraduate Studies, Academic Programs & Policy of the Central Office of Academic Affairs for further assistance if needed.
Overview of Advising

At BMCC advisement is provided by professional staff in the Academic Advisement & Transfer Center (AATC), special programs (ASAP, BMCC Learning Academies, College Discovery), and faculty. All students are required to meet with an advisor each semester prior to registration. Through a batch process by the Registrar’s Office, advisement holds are placed on all students’ records at the point of rollover for the next term, with the exception of students who have filed for graduation. In addition to providing academic and transfer advisement, the advisors in the AATC work with the academic departments to create articulation agreements and coordinate events that help students explore their options after BMCC (e.g., transfer fairs and information sessions).

The AATC is open seven days a week during the regular fall and spring semesters and have extended hours year-round in order to give students options on meeting with an advisor. In addition, students are given the option of doing eAdvisement through their BMCC email addresses or through Skype/Facetime. Though the academic departments do not have the extensive hours of the AATC, each semester the departments are required to provide an advisement schedule that is centrally posted on the AATC website for easy student access.

Degree Mapping Process

The degree mapping process began as a result of the restructuring of advisement at BMCC. As new advisors were onboarded, the college met with academic chairs to discuss the restructuring of advisement. Part of the restructuring of advisement involved advisors acting as liaisons to the academic departments. As a liaison, the advisors provide updates and trainings to the departments on topics pertaining to advisement and transfer, including DegreeWorks. Conversely, the advisors will bring updates back from the departments to share with the advising staff.

As an assignment for the advisors to learn more about the majors offered in their assigned departments, each advisor was assigned the task of creating two- and three-year degree maps during the fall 2016 semester. All maps were shared with the academic department chairs to review. The format for the two-year maps assume that students will have no remedial needs, and the three-year plan assumes that students have all three remedial needs (reading, writing, and math – but at the highest level).
BMCC chose this approach (having the academic advisors create the maps) for several reasons:

1. To ensure that there was a level of consistency in the degree maps.
2. To help facilitate the creation of the maps rather than place the burden solely on the academic departments.
3. To allow the academic advisors to have a better understanding of the academic programs.
4. To promote more academic planning rather than semester advisement.

All BMCC majors/concentrations were divided among the academic advisors from the AATC. Each were directed to look at the programs and course sequencing in order to create realistic plans that students could complete in two- and three-year time frames. Maps were created assuming that the audience would be first-time freshmen to BMCC, and not transfer students or second-degree students. The usage of the maps was initially as a recruitment tool for students thinking of enrolling in BMCC and not as a primary advisement tool for continuing students. DegreeWorks will continue to be used for semester advisement as well as long-range academic planning.

The faculty have also been very receptive to this process, and most have indicated that the degree maps will not only be beneficial to students but to their department as well (some departments are undergoing an APR and are using the drafted degree maps in their submission). The faculty also appreciate being consulted on the degree map creation rather than this being an administrative action.

In completing this exercise, issues with some of the programs and students’ ability to complete them without exceeding the listed number of credits came to light. We were able to then use this information to meet with the chairs and discuss ways for them to eliminate any hidden prerequisite. Though there were not many issues, even having one program with a hidden prerequisite may negatively affect thousands of students. Already, one department has submitted a curriculum revision to address their hidden prerequisite issue.

Based on the feedback from the department chairs, a first working draft was created and shared with the Office of Public Affairs at BMCC to design a template for the two- and three-year maps. All maps have since been designed in the updated format and will be presented to the department for final approval and published.
Use of Technology

Though DegreeWorks has been implemented at BMCC for over 10 years, use of the system did not become the standard practice until the college went onto CUNYfirst. At that time, as it is primarily an advising tool, maintenance of DegreeWorks was moved from the Registrar’s Office to the AATC. The college has used the DegreeWorks Classic Planner to keep a record of advisement and business processes made to use the system accordingly.

However, with the upgraded system, the introduction of the Student Educational Planner (SEP), has expanded the options of student tracking and reporting possibilities. Currently, we are piloting the use of SEP with one of the college’s special programs, the BMCC Learning Academies. Based on their findings and feedback, we will determine how to rollout this feature to the larger population.

As the system must be maintained to advise students effectively and for the certification of TAP, we will use DegreeWorks to display the degree mapping course sequencing using templates in the Student Educational Planner module, rather than utilizing other software.

Maintenance and Updates

Prior to the advisors working on the first drafts of the degree maps, we identified the need to create a schedule to update this information. As the director of advisement works with the dean of Academic Affairs and director of publications to update and maintain the college bulletin, they collectively decided to move from a three-year catalog to a one-year catalog that spanned an academic year. By making this change, we were better able to coordinate DegreeWorks scribe maintenance for curricular changes and website updates and to implement a plan for updating the degree maps.

Brooklyn College: Creating Degree Maps for Academic Momentum [Contributed by Jesus Perez, Director, Center for Academic Advisement & Student Success, Brooklyn College]

Beginning fall 2017, the Center for Academic Advisement & Student Success (CAASS) embarked on a campaign to inform departments of the necessity of partnership in the creation of degree maps. The goal of the campaign was to create an open dialogue with faculty that enabled all stakeholders to understand how closely a student’s certification of financial aid, and ultimately their persistence, was correlated to the creation of curriculum, bulletin language, proper scribing of DegreeWorks, and academic planning.
The senior academic advisor created a template that was shared with deans and chairpersons at meetings set up by CAASS. At these meetings, CAASS offered to lead the effort and handle the administrative side of the project, while departments would be responsible for the sequence of their majors and an integration of the Pathways curriculum. Shortly after these series of meetings, departments began to contact CAASS with questions regarding format, clarification requests, and some with partially completed maps. To handle this influx, the project needed to be formalized.

In March 2018, the director of the Student Success Center (former co-director of CAASS), acquired a budget of $19,640 to support the project and appointed a senior academic advisor to lead the project. These two staff hired four NTAs to support the project. Following on the series of meetings from the fall semester, a formal request for all academic departments to submit drafts of their degree maps to CAASS was sent out. An email inbox (DegreeMaps@Brooklyn.cuny.edu) was set up to receive and store the submissions. All members of the team were granted access to the inbox.

The following workflow was established. The senior advisor’s team would review all the submitted degree maps alongside the major requirements listed in the bulletin and on the website. Each person was charged with reviewing 10-18 submitted degree maps. As part of the review, each member checked prerequisite requirements closely, to assure the submitted degree maps observed all the appropriate prerequisites, and, if not, to disclose any inaccuracies. Particular attention was paid to hidden or embedded prerequisites as well as recommended courses versus required courses. This was quite labor-intensive as it meant checking the Brooklyn College Bulletin, the website, DegreeWorks, and the Chancellor’s report to ensure that there were no inconsistencies.

Often, the team had to insert the appropriate Pathways requirements into the degree maps, as well as any general electives. Almost all academic departments simply submitted a course sequence for their major requirements and did not include any suggested course sequence for the Pathways requirements. Because of CAASS staff’s deep understanding of advisement practices as well as curricula and enrollment trends within the college, there has been a successful conjoining of Pathways requirements with major requirements in the degree maps.

The team would then present the updated degree maps to the respective departments with questions or to attain their approval to proceed with publication. Once CAASS received approval, the files would be converted into a PDF and shared with the communications department, who in turn would prepare the file for publication on the website.
In sum, the first stage of the project can be described as the design stage; a standard template for all degree maps was generated. The second stage was the auditing stage; the team “fact checked” all the submitted degree maps. The third stage was the editing stage; the team entered the data into their template and reached out to the respective academic departments to address any inaccuracies before gaining their approval to proceed. The fourth stage was the marketing design stage; the team handed over the finalized degree maps to the communications department, who in turn redesigned them in accordance with the college’s overall marketing standards. The fifth and final stage is the publication stage; the team is working with the Communications Department to create a website that will be a repository for all degree maps.

In conclusion, the main role of CAASS in the development of degree maps at Brooklyn College was that of auditor and editor, whereas the role of each academic department was that of author. If the submitted degree maps were not “fact-checked” before publication, they would have contained errors and inaccuracies, and some hidden prerequisites may have remained uncovered. In fact, considering how often curricula evolve, the degree maps will require constant vigilance and updating to be aligned correctly with each new bulletin year. Additional DegreeWorks scribers and other resources will be needed to efficiently maintain this project.

Queens College: “QC in 4” Degree Maps, Onboarding, and Advisement [Contributed by: Danielle Izzo, Senior Academic Advisor & Assistant Director of Freshman Retention and Completion Initiatives, Queens College]

Overview

Established in the fall 2017 semester, “QC in 4” is a program available to all incoming full-time, first-time freshmen who are committed to graduating in four years. The program functions under an opt-out model as students do not have to apply to the program in order to participate. All full-time students, regardless of special program affiliation, are enrolled in QC in 4.

The mission of QC in 4 is an important one: increase retention and graduation rates by creating a robust campus culture that focuses on timely degree completion in four years. It is a strategic effort that considers the CUNY Momentum Campaign and Excelsior Scholarship as vital components in shifting the culture as well, messaging that the completion of at least 30 credits per year is paramount in sustaining academic momentum.
While the program is overseen by the vice president of enrollment and student retention, the Academic Advising Center is the nexus from which program services develop. It is the locus where students are shown the tools necessary to be achieve their goals and graduate on time. Therefore, providing students, from the beginning of their college careers, with services that facilitate first-year success strategies are foundational to this effort.

Through mandatory advisement services, a signed commitment form, structured academic program maps, and assistance with providing unavailable courses that may delay graduation, QC in 4 emphasizes a partnership between the college and student in order to graduate Queens “in 4.”

**QC in 4 Commitment Form**

While all full-time students are part of QC in 4, signing the commitment form is an important opportunity for students to understand their responsibilities and the benefits of being part of the program. They receive a copy so they can reference these points at any time. Some highlights include:

**Student Responsibilities**

- Meet with an academic advisor in the Academic Advising Center prior to the designated enrollment appointment **each semester** to discuss course selection, progress toward graduation, and degree mapping.

- Be continuously enrolled in and successfully complete at least 15 credits each fall and spring semester, or 30 credits per academic year by adding winter and/or summer coursework.

- Notify the college that graduation may be delayed due to course unavailability through needaclass@qc.cuny.edu during the enrollment period **before** the semester has begun and discuss any possible course substitutions with an advisor.

**Queens College Responsibilities**

- Ensure the availability of courses to enable the completion of the fall 2018–spring 2022 four-year Academic Program Map.

- Work with the academic department(s) for course substitutions, independent study assignment(s), or requirement(s) waivers if the students meet all conditions of the Academic Program Map but are unable to graduate with a bachelor’s degree in four consecutive academic years due to course unavailability. If the dean(s) of the division(s) determine that none of these adjustments is academically acceptable, Queens College will pay the tuition for the students to take the course(s) required for degree completion within the next academic year at Queens College.
Marketing and Proactive Advisement Best Practices

It’s key that students understand the mission of QC in 4 and why the program is beneficial to them. Communicating QC in 4’s goals to reduce attrition and increase retention and four-year graduation rates helps students understand the value of the program. In order to normalize the concept of four-year graduation, annual credit benchmarks, and regular academic advisement, it is vital to merge the efforts of academic advisement with strategic marketing as soon as a student enters the college:

- Communications from admissions begin upon acceptance, outlining to students the opportunity to be part of QC in 4.
- Admissions places incoming freshmen in the CUNYfirst QC in 4 student group as well as the QC in 4 hold on their accounts in CUNYfirst, indicating that students must attend a freshman orientation and meet with an academic advisor before registration.
- At freshman orientation, students are given a presentation about the goals and benefits of QC in 4, credit benchmarks, and the importance of enrolling in 15 credits each semester. Students sign the commitment form with their academic advisor during registration.
- After freshman orientation, students have QC in 4 holds (negative service indicators) in their CUNYfirst accounts, requiring participants to meet with an academic advisor before registering for the following semester. These holds are mass-assigned during freshmen and sophomore years.
- During these advising sessions, advisors strategize with students on how they can earn 30 credits per year and show students their Academic Program Maps that will guide them to graduation in four years.
- Communications and marketing interventions take place during strategic moments during each semester. Students are contacted through Hobson’s Retain reminding them of their advisement holds, credit benchmarks, and actions needed to be taken based on queries in CUNYfirst. The QC in 4 website has also been updated with tools for students to help them stay on track. There is also a Facebook QC in 4 group page to make various announcements.

The “Plan. Earn. Complete.” and “30-60-90-120” Campaigns

The “Plan. Earn. Complete.” and “30-60-90-120” campaigns urge students to stay focused and motivated via posters, palm cards, the website, and email graphics.

- **Plan:** Receive an Academic Program Map from your academic advisor on your chosen major and strategize how you will complete your degree. Planning early is KEY.
**Earn:** Stay on track earning at least 15 credits each semester and visit your academic advisor to make sure all of the credits you’re earning are counting towards your degree.

**Complete:** Successfully complete all required coursework for your degree in four years and we’ll see you at graduation!

- **30-60-90-120:** By reframing the conversation about graduation around credit benchmarks, a sense of urgency is created through the 30-60-90-120 campaign, helping students understand their academic goals each year. Advisors relay to students all of the creative ways they can earn 30 credits per year—thinking about intersession, online classes, and possibly increasing credit loads in fall or spring semesters (especially important for recipients of the Excelsior Scholarship).

*John Jay College: Academic Momentum: It Takes a Village* [contributed by: Kate Szur, Senior Director, Student Academic Success Programs and Sumaya Villanueva-Gaines, Senior Director, Academic Advisement Center, John Jay College]

At John Jay College, the creation of Student Success Teams for first-year students in fall 2015 set the foundation for a coordinated approach to supporting credit accumulation and gateway course completion across the institution. First Year Success Teams are composed of a peer success coach, an academic advisor, and a career specialist, all linked to a faculty member teaching a first-year seminar.

*Success Team Two-Year Planning Framework, John Jay College 2015*
Success team members support effective first-year transitions through student planning sessions, general education advisement, and introductory career exploration. In the sophomore year, the focus shifts to exploring majors and minors, and to aligning academic opportunities and decisions with post-graduate goals and preparation.

From fall 2015 to 2018, enrollment in success-team-supported first-year seminars grew from 710 to 1,222 students. The impact of this coordinated momentum support is reflected in first-year retention, which increased from 78% to 80% from 2015 to 2017, and the percentage of the freshman class reaching the 30-credit milestone, which went from 52% to 59% within the same timeframe.

Ultimately, based on the lessons learned from the Student Success Teams—and to sustain student momentum to graduation beyond the first year—John Jay College established a re-enrollment campaign working group that coordinates continued registration processes and communications, and tracks enrollment behaviors by student cohort and class standing weekly during the registration period. The re-enrollment campaign group meets monthly and includes representatives from all divisions: Academic Affairs, Student Development and Enrollment Management, and Finance and Administration and focuses on:

- Coordinating business processes across offices and divisions during the registration period.
- Designing and implementing campus-wide media campaign on academic planning and registration.
- Tracking students’ completion of advising, registration, and resolution of bursar and financial aid holds.
- Email and phone outreach regarding advising and bursar holds and registration appointment information.
- Email outreach for re-enrollment that segmented the freshmen class based on students not registered, students who had to repeat a class, students with GPA below 2.0, students with bursar hold, and students that needed to take the First Year Seminar.
- Tracking and targeted outreach to students registered for 12 credits.
Hunter College: Advising Model and How to Incorporate Major/Career Exploration [Contributed by David Lau, Director of Advising and Bertha Peralta, Assistant Director of Advising, Hunter College]

In fall 2013, the Office of Advising made a significant change to engage and assist students by using a caseload model. Since then, we have worked extensively with faculty major advisors from the academic side to create an expanding network of advisors. Part of this partnership was the creation of our Hunter College Academic Advising Syllabus, which outlines our advising relationship, process, and approach for students. It also gives the student a set of learning outcomes they are expected to achieve through their educational experiences at Hunter.

Collaboration with our Career Colleagues

Based on the second learning outcome in the syllabus, “Develop an education plan for successfully achieving your goals including selecting a major that aligns with your values, interests, and abilities….”, we wanted our students to self-assess values, interests, and skills, in order to begin the process of choosing a major and formulating career options.

To assist students in reaching this outcome goal, we reached out to our Career Development Services office and found out about the FOCUS 2 online tool - https://www.focus2career.com/Index.cfm, which helps students explore majors and occupations that match their personal attributes, and plan their academic career-relevant experiences such as internships, study abroad, and volunteer experiences. It provides a series of self-assessments, and the results are matched to supporting majors and career options with over 1,000 occupations and up-to-date career information. The cost of the system depends on the number of students enrolled at the institution and the number of administrative accounts needed. Our current cost at Hunter is about $1,300 per year.

Incorporating FOCUS 2 into Major Exploration with Freshmen

For our incoming freshmen population, it starts with our peer advisors and learning communities during the summer prior to and fall of the students’ first year, which then expands to include primary assigned professional advisors in the second semester of freshman year, and academic unit/faculty advisors upon major declaration.

In past years, our peers would offer workshops focused on general education academic requirements during the fall semester, which would include an introduction to major exploration and the FOCUS 2 program. Students would be encouraged to visit the Career Development Services office for more information. Our peer advisors would also discuss the tool during one-on-one advising sessions. The
goal was to encourage students to think about major exploration, whether they knew immediately what they wanted to major in coming into Hunter or not.

To expand our office’s student-centered teaching and learning process of academic advising, we decided to further our collaboration with the Career Development Services office by having their career counseling staff train our peer advisors on how to use the FOCUS 2 online tool. It is introduced to the advisors in their main training session in August, before the fall semester begins. They are asked to take the assessment inventories in the tool, and then one of the career counselors walks them through each inventory and discusses the uses and relevance each tool has when advising students.

The advisors would introduce the tool to freshmen upon their advising session (one-one/group advising) during the fall. After the student completes the assessments, they are encouraged to meet with a career counselor to go over the report, but they could also review the report with an advisor to get some initial guidance in terms of exploring a major. Advisors would also be able to provide more in-depth information to freshman, who were undecided about their major and/or have changed paths from what they initially came in wanting to do (more common with Pre-Med/Pre-Nursing students).

In summary, we have found the FOCUS 2 online tool to be very useful in helping us to facilitate a discussion of student development based on major exploration. It provides advisors with an opportunity to engage the major research discussion with students from the career angle, which leads to more student exploration of our degree maps in order to graduate on time.
Communications and Marketing

Each college develops its own coordinated, thoughtful communications plan for students, advisors, faculty, and staff to stay well informed about degree maps (where to find them and how to use them) and the college’s Academic Momentum efforts overall.

General Guidance

- Prerequisites must be transparent, clearly explained, and included in degree maps within credit allowances.
- Degree maps must be easy to find and understand. Ensure all terms are consistently used and clearly explained. Develop a glossary.
- Comply with the Americans with Disabilities Act (ADA). Provide multiple formats; do not rely on a single location or technology to make degree maps accessible to all (http://www2.cuny.edu/accessibility/).
- Set procedures to ensure that communications materials reflect current practices—and that any changes to those practices are communicated quickly and effectively. Review and update the website on a regular basis (at least twice per year).

Reaching Students

- Include degree maps in recruitment/admissions materials and in orientation. Integrate degree maps into many aspects of the academic experience.
- Mirror the language of the 15/30 campaign: “Graduate on time,” “The longer you stay, the more you pay,” etc. Emphasize taking the right courses at the right times. Avoid jargon (including "degree maps/degree mapping"). Communicate that earning a degree is a two- or four-year process.
- Include references to “graduate on time” linking to your student-friendly page throughout your site; place the primary link in a section visible from your homepage.
- Place maps together to allow students to browse and compare.
- Use social media to promote awareness.

Reaching Faculty, Advisors, and Staff

- Work through the provost’s office to communicate the student impacts of consistent advising, with an emphasis on graduation rates and overall student debt.
- Ensure that faculty, advisors, and staff receive notice when materials are updated.
- Ensure that recommendations on different departments’ pages follow a consistent format, to facilitate advising outside the departments.
IV. TECHNOLOGY

Overview of Platforms and Tools at CUNY

This section focuses on DegreeWorks and its new Student Educational Planner (SEP)—and how they can best be used to support degree maps.

With DegreeWork’s SEP, advisors can create pre-defined academic plans (templates) based on the degree map and/or degree requirements scribed in the academic advisement audit. Note that these plans are not dynamic in the sense of automatically recalculating degree requirements each semester.

Although CUNY has implemented a number of technological tools to support its mission, student success, and the Academic Momentum Campaign, DegreeWorks is the one advisement technology that is in use across all of CUNY. DegreeWorks is driven by CUNYfirst and is directly connected to and feeds FACTS, CUNY’s financial aid system.

Other advisement technologies in use across CUNY include Starfish and EAB.

Starfish
Several CUNY community colleges use Starfish, which has an educational planner feature that may be used to deliver degree maps—should the college choose to explore and invest in that additional module and service.

EAB
CUNY plans to roll out EAB’s Student Success Collaborative, a predictive analytics service, for senior and comprehensive colleges in the next year. While EAB is an advisement technology, it is not a degree audit system, nor does it have the same features and services as DegreeWorks. EAB does not include a degree audit, show courses needed to fulfill remaining degree requirements, or have degree mapping functions.

DegreeWorks and EAB are not interchangeable; you cannot choose one over the other. To clarify the differences, the Core Functionality and Features of EAB are provided below for reference.

- Advisement Caseload Management System with a profile of each student and his/her academic performance with an assessment of their risk level for graduation. This will include “success markers” such overall GPA, GPA trend, performance in key courses, credits earned, and course registrations.
• **Predictive Analytics:** Use of analytics to understand both cohort-level and individual student risk to facilitate timely and strategic interventions.

• **Appointment Scheduling and Coordinated Care Network:** Academic Advisors and Faculty will have the ability to refer students to academic support centers or other student services and/or make appointments for students for services. Through a closed-loop reporting system, advisors can see whether students followed up on the referral.

• **Early Warning System:** Faculty and others can give early warnings.

• **Multi-modal Communications:** Advisors can engage with individual students or groups of students by email and text messaging through the platform.

• **Dashboards and Reports:** A large variety of reports and dashboards are available to enable administrators and other stakeholders track the academic progress of the student body and groups within the student body (e.g. SEEK students, first-time freshmen, or any defined cohort).

• **Student-facing Mobile App** will provide a guide for students to access different student services, make appointments, etc. Provides information on the academic calendar, deadline reminders, bursar information, etc.

**DegreeWorks**

DegreeWorks is the CUNY university-wide degree audit system and an advisement technology. It is coded based on the degree requirements and academic policies for the catalog year in effect as of the first semester the student is enrolled or readmitted, and lists requirements for the catalog year plans and sub-plans that are coded in CUNYfirst. The audit provides the degree requirements required, in-progress, transfer, and completed courses.

DegreeWorks can only be effective to the extent that it is maintained and updated as curricular changes are approved by local governance, the CUNY Office of Academic Affairs, and the Board of Trustees.

Keep in mind that adopting technological tools to help bring momentum strategies to scale is critical—but often, policies, procedures, curricular reforms, and other strategies are being worked out at the same time. Thus, while we strive to enhance DegreeWorks features and use, we encourage you to move forward with your Academic Momentum plans with the understanding that DegreeWorks is a work in progress.
**DegreeWorks Features**

DegreeWorks has a number of features that are coded based on a set of independent tables that work interactively with data extracted nightly from CUNYfirst. Each college determines which functions are implemented. The most widely used functions are:

- **Audit/Worksheet**: Processes students’ academic and course history information against degree requirements in the college catalog.
- **What-If**: Simulates a change of degree, major, minor, or concentration at a student’s current college. Courses are evaluated against new degree requirements by catalog year. This feature was enhanced for evaluation of student opt-in/out decisions for Pathways.
- **Look Ahead**: Simulates an audit/worksheet with courses the student plans to register for in future terms.
- **GPA Calculator**: There are three different GPA calculator functions: Graduation Calculator, Term Calculator, and Advice Calculator. The GPA calculator is an estimate and rounds up the numerical value. It is not official calculation of students’ GPAs.
- **Exception Management**: Selected users (those granted rights by the college, based on local structure and areas of responsibility) may process any course exceptions or substitutions that have been approved for a student.
- **Notes**: Selected users may view, add, modify, or delete action items or recommendations on the audit.
- **Curriculum Planning Assistant (CPA) Reports**: Selected users may generate a series of pre-defined reports based on students’ degree audit information, including but not limited to: academic history and progress, degree requirements including courses non-applicable towards the degree, and summative data from other DegreeWorks functions including Student Educational Planner data.
- **Help**: Colleges can add links to campus resources or the University Registrar resource page.
- **Contact Us/Report a Problem Radio Button**: City, Hostos, Hunter, LaGuardia, Medgar Evers, Queensborough, Staten Island, and York added a link to the campus DegreeWorks helpdesk. Other reporting methods include email, walk-in services, and reporting to advisors.
- **Find**: Search tools where select users can search for students’ audits by major, class, year, degree, etc.
New Functions Planned for Release

- Transfer What-If Function: Course History tab displays courses from the home college; the Partner College tab lists transfer courses taken at another CUNY college. On the Transfer What-If Audit, courses are applied to the degree requirements from another CUNY College. The Transfer What-If is not saved and is dynamically created each time a degree program is selected.

- Audit API: Data from the advisement/worksheet audit can be displayed as an advisement report, which simulates the information from the standard audit. This Audit API report has been integrated with the CUNYSmart application and is being piloted with several colleges.

- Student Educational Planner (SEP) API: Data from SEP can be extracted and reformatted into different applications. SEP API data will be integrated in CUNYfirst with the new University Scheduler Program. (As of fall 2018, this new application is being piloted at two colleges and is in the procurement process.)

DegreeWorks Student Educational Planner (SEP)

The Student Educational Planner (SEP) is an advisement planning tool that students and advisors can use to create academic plans based on a student’s future academic goals. The SEP format allows courses from the degree audit to be pulled into the plan with a simple drag-and-drop action from the audit that also displays on the SEP function. This is one form of a degree map insofar as it can present a 2-4 semester list of degree requirements by major. Currently, only advisors have access to create academic plans. It has to be manually updated by an advisor and recalculated each semester and tailored to individual students.

Pre-defined plans, or SEP templates for particular degree programs, majors, and/or general education, can be created ahead of time and loaded for student advising. The loading of pre-defined plans can be done on an individual basis during an advising session or can be batch loaded for a selected group of students. The use of a template does allow a plan to be modified after the template has been loaded onto the student SEP.

Capabilities of SEP

- Unlimited number of semesters/terms and requirements can be listed on a plan.
- Student can have multiple plans.
- If a student has a plan, it will display after clicking on the plan tab. The option also exists to select a blank plan and create another one. SEP has a What-If function. Courses listed on a
plan can be processed against a new degree or major. SEP courses will display in the What-If degree audit.

- **Requirement Types:** There are six standard requirement types: Choice (list of courses), Course, GPA, Non-Course, Place, and Test. The application has the ability to expand this list. The list of requirements can be defined by each college.
- **Identify Course Attributes.**
- **Notes on individual requirements.**
- **Unlimited text/formatting in notes.**
- **Courses listed in the plan will be highlighted on the SEP audit on SEP.**
- **Courses from one plan can be dragged and dropped to a new term in a different plan.**
- **Requirements can be flagged as critical for tracking.**
- **Minimum grade, campus, and delivery method added as course requirements.**
- **Multiple View Options:** Plan View – Calendar, Audit, Edit, Notes.
- **Templates loaded into individual student plans can be modified.**
- **Scribe Pointers can link an unselected choice requirement to a rule on a student’s planner audit.**
- **Plans approved by an advisor can be locked, but once locked can’t be updated until unlocked. This feature is accessible to selected users only.**
- **Course validation – confirms if courses listed are being offered in the current term or will be offered in future terms.**
- **Customize configuration and settings to manage functionality.**

**SEP Campus Configuration and Settings**

SEP requires setting up tables that determine the features and data values available.

- **There are 56 settings that need to be set, based on which features/data will be released.**
- **Setting SEP functionality is referred to as configurations to the Shepard Settings (Keys) or UCX tables, which are maintained by the college’s authorized user(s).**
- **The authorized users can be the DegreeWorks coordinator or the manager of SEP who may reside in the campus Academic Advisement office.**

The following are some of the many features/data elements that can be college specific:

- **The view when browsing templates (flat, tree).**
- **Display of minimum grade, credits, campus, delivery on a requirement.**
- **Campus location on a course requirement (main, off-campus).**
- **Delivery mode on a course requirement (online, hybrid, in-person).**
• Notes on requirement, terms, and overall plan.
• Display of course catalog on sidebar.
• Display of coursework “still needed” sidebar.
• Course Link: student can click on a course to get additional information (description, meeting times, instructors, prerequisites).

All changes to the configurations originate in the DegreeWorks Test Environment by the college’s authorized user(s). In order for changes to appear in Production, a CRM ticket has to be submitted to CIS. CIS DegreeWorks administrators will then copy the table data from the Test Environment to the DegreeWorks Production Environment.

A detailed reference of the Keys and UCX tables as they relate to the different elements of SEP are available in the DegreeWorks Student Educational Planner Guides 4.1.6.

SEP in Support of Degree Maps

SEP is one of the tools that will help students understand and track their degree requirements as defined in the degree map for that program.

SEP can be used to display each semester’s courses listed in the degree map for a specific degree program or meta major. When using SEP to display meta majors, consider using the drag-and-drop feature from the Advisement Audit to identify the courses students need to complete for the general education or elective courses.

Another option is to code the degree map in a template and download the pre-saved template during the individual advising session. Or, these templates can be applied to a select group of students before they meet with an advisor.

Students can view the degree maps on SEP before they meet with their advisors. During the advisement interaction, they can finalize the courses for the next semester or future semesters.

However, before SEP is implemented for each degree map, each college needs to:
• Develop an implementation plan.
• Offer training.
• Develop troubleshooting procedures.
• Develop marketing materials.
CIS will:
- Investigate if degree mapping information can be added to the first screen of SEP as another communication medium to help students understand the benefits of completing their courses in the correct sequence.
- Explore how to add a line to the bottom of the disclaimer for an advisor’s signature.

**Campus Implementation Considerations**

Here is a list of questions and considerations for each college DegreeWorks/SEP team to address as they manage the SEP implementation process:

- Who will use SEP?
- Who will create/edit/maintain the plans?
- Will templates be used?
- Will templates be created for all degree maps and/or meta majors?
- How many active plans will be set for each student?
- Will approval/locking be used?
- Who will lock the plans?
- Will tracking be used?
- Will there be a standard descriptor for each template?
- Which catalog years will templates be created for?
- Who will create/edit/maintain templates?
- Which plan view will be used for students?
- Which plan view will be used for advisors/faculty/staff?
- Who will troubleshoot, resolve issues, and communicate the resolution to the student and/or advisor?

**Additional Factors to Consider when implementing SEP**

- Templates are recommended to be used for freshman or students with few transfer courses.
- Consider allowing continuing and transfer students access to create their own plans. Plans for these students will be customized each term depending on the number of courses remaining to be completed.
• Consider setting the view “SEPAUD” as a default for these students, which allows them to see the audit on one side and the plan on the other. They can easily view what courses are remaining and drag and drop the courses into the plan. The advisor can then approve these plans and lock them.

• Tracking is required to determine if a student is following a plan.

• Consider if “Course Link” will be added to the plan. This allows users to get a pop-up window with information about the selected course. This is a customized feature that CIS has to setup.

• Establish standard naming conventions for “Place Holders” for major courses, electives, other requirements such as community service or internships.

• Determine what counts as a “Critical Course.” The critical requirements indicator allows reporting to students and advisors if they are off-track on the course listed on a plan.

• Users can run a “What-If” audit on a plan if a student is considering selecting a different degree program and view how courses selected on the plan meet the new degree requirements. This can be especially useful if templates are created for meta majors.

SEP Limitations and Challenges

• Courses that a student does not enroll in or successfully complete do not automatically move to another semester. These courses must be manually moved into another plan—and that plan changed to another term.

• Plans do not display the total number of equated credits for developmental skills courses. The plan format that totals the number of credits for the term is not designed for an enhanced semester calendar.

• The SEP version in DegreeWorks Production is experiencing performance issues. Performance can be improved by determining the settings the colleges plan to release. A list of these settings has been provided to each DegreeWorks coordinator. Also, CIS is working with Ellucian to determine how to improve the performance of SEP and the overall application in Production.

CIS Maintenance and Migration of SEP Data

The coordinator managing SEP and developing the templates needs to code these in the DegreeWorks Test Environment, along with setting up the tables.

After a plan is created in the DegreeWorks Test Environment, viewing that plan requires the DegreeWorks web server to be restarted, which occurs nightly.
A CRM must be submitted to CIS to:

a. Request access for users to the Production Environment. Must complete the spreadsheet to identify the user and the roles they will have access to.

b. Request that plans, templates, and tables are copied to DegreeWorks Production.

c. Apply templates to a specific cohort of students. Must include information on the degree program, student type, catalog year, and term the templates should be loaded. CIS will create a web form to be attached to the CRM.

d. Run selected batch programs (as listed below) in Production. It is recommended that a schedule is developed to run these each term.

**DAP 54: Create Plans for Templates**

Specific templates will be applied to a group of students. This program can be set to find the best template based on matching a template tag and student’s goal data.

**DAP 58: Batch Tracking Processor**

Updates the tracking status on active plans. Can also be set to track status on courses selected in future terms.

**DAP 59: Batch Timetabling Processor**

Generates reporting data by running an audit against the student’s plan and storing the results in the CPA Tables. Data can be used for reporting and schedule forecasting.

**DegreeWorks Coordinators’ Concerns about SEP Implementation**

As of fall 2018, only a few DegreeWorks coordinators have been involved in the implementation of SEP. The colleges that have developed plans and applied these plans on SEP are:

- Baruch – working with their SEEK coordinator
- BMCC – conducting a pilot with selected freshman population
- Hostos
- LaGuardia – deployed plans for selected programs as part of their Student Success Initiative (LaGuardia’s SEP rollout is described below)
- Medgar Evers College
- College of Staten Island – developed plans aligned with their degree maps; planning to use SEP soon
Most of the colleges, except for two, have released SEP in Production. The number of templates released in Production vary per college. Coordinators have expressed concern that they cannot manage this function in addition to managing the work load for the advisement audit and scribing/surecode maintenance.

**DegreeWorks System Maintenance and Business Practices**

If colleges intend to use DegreeWorks as a vehicle for delivering their degree maps, and they plan to utilize the Student Educational Planner, they must plan to provide the staff necessary to ensure that DegreeWorks is maintained.

College advisors and DegreeWorks coordinators report that there are not always clear communication channels or procedures for reporting errors or operational malfunctions or implementing systematic workflows to update data. Users (faculty, staff, students) often do not let them know when there are problems, and advisors and coordinators need specific information about the problem in order to review, fix, and update the issue.

The skill level and focused attention required to maintain DegreeWorks are often underestimated. Curricular requirements are constantly evolving and can be quite complex. For example, a single course change might impact general education requirements, overlay requirements, and major requirements. Prerequisite rules, contingencies, and other curricular complexities are common. Further, as noted by one DegreeWorks coordinator, “There are often four versions of a single curriculum: the bulletin, website, academic program worksheets, and departmental brochures.” When asked about the key issues impeding usage of DegreeWorks, ten college DegreeWorks coordinators reported that the system is difficult to maintain due to lack of staff support or to curricular complexity.

Without clear business practices for maintaining DegreeWorks and for identifying and addressing problems, some data inaccuracies will exist and/or will be slow to be corrected. This creates a vicious circle; if users are unwilling to rely on the system, there will be fewer users reporting inaccuracies and needed updates, which will in fact compromise the data quality.

**The FACTS System**

The FACTS system is completely reliant on the DegreeWorks Audit/Worksheet, and it is equally complex in terms of maintenance challenges, requiring as much time, attention, and staffing.
Errors have a potentially damaging impact on enrollment management, course compliance, and scheduling as it relates to financial aid certification.

Federal regulations that began in fall 2013 require that financial aid must be disbursed and funds awarded to students within ten days of the start of classes. As a result of these new requirements, CUNY had to change the close dates in its systems to the seventh business day after classes start to align with the federal financial aid certification deadlines. While it is possible to make changes to student financial aid certification files after these dates, it must be done through an appeal process on a case-by-case basis. Students need to be able to enroll in the appropriate courses that are financial aid eligible for their degree and have enough credits to qualify for financial aid.

These changes in the federal regulations have placed a burden on TAP certification officers and FACTS coordinators—as well as academic advisors. Advisors play a significant role in the TAP certification process, because they ensure that students are registering for classes that are TAP eligible. Advisors also play a significant role in the TAP waiver/appeal process. All of these processes depend on accurate, functioning, and aligned DegreeWorks and FACTS systems.

The issue of the 24-72 hour time lag of data change in CUNYfirst to DegreeWorks is a problem. In addition, the copying of blocks to fix issues that are reported need to be more flexible. For example, if a solution is found to an issue that is impacting a large group of students, the changes in the system won’t be seen until the following week. If DegreeWorks coordinators had access to Scribe Production, this would eliminate the need for CIS to copy blocks on the weekend.

**Data Integrity in DegreeWorks: Staffing and Training**

Colleges likely have insufficient staffing levels of DegreeWorks professionals. The work of the DegreeWorks staff is complex and requires a sophisticated level of skill and understanding of coding, curriculum, financial aid, admissions, and registration processes. A functional knowledge of CUNYfirst, DegreeWorks, FACTS, and the flow of data from one system to another is a requisite skill set as often issues that present as an error or problem may originate in CUNYfirst or be related to a data migration instance between any of the systems. Staff must also keep current with changes in DegreeWorks, as well as changes in the college curriculum, policies, and procedures. Colleges, with support from CUNY Central, need to provide ongoing training and development for DegreeWorks staff, both new and senior.

Based on a survey of the DegreeWorks Council and registrars, the key positions identified to adequately support a well-resourced advisement/DegreeWorks operation that handles business workflow, training, scribing, systems alignment, and changes in the college curriculum, policies, and
procedures are: Curriculum analyst & senior manager, DegreeWorks coordinator, DegreeWorks master scriber, and DegreeWorks support staff.

Scribing is the process and programming language used to code academic policies and degree requirements. These rules are used in conjunction with data coded in the other DegreeWorks applications—Shepentry, SureCode, and Transit. The web audit algorithm uses data from these three applications to display requirements in the web application.

College staff must be trained on this programming logic and on the interrelationship between data from these applications and CUNYfirst. They must translate the academic policies and degree requirements into DegreeWorks and determine which scribe rules to code to have the audit algorithm display requirements correctly in the web audit.

The scribing is done locally by the college’s DegreeWorks staff in the test environment, and after the coded rules are tested with different student cases, the scribed blocks and tables are migrated into the production instance by CUNY Central staff via CRM. Currently, the migrations from test to production for the blocks and tables is only available on the weekend.

The maintenance of DegreeWorks and FACTS also requires technical staff at Central CIS responsible for developing and updating the extract programs, setting up and updating the PC applications, maintaining the production environments, and training the colleges’ coordinators and scribers on how to code their requirements. In addition, the production support staff reviews Customer Relationship Management (CRM) tickets and resolves issues. Currently, CIS has a limited number of staff resources assigned to these duties, and these staff members have other programs they are responsible for supporting and maintaining.
LaGuardia Model: Student Educational Planner (SEP) Rollout

DegreeWorks in Advising Prior to SEP

LaGuardia Community College was an early adopter of what is now called the “classic planner” (CP) in DegreeWorks as an advising tool. The CP was used as a blank planner by professional advising staff to populate first semester advisement for incoming students at New Student Advising and Registration (NSAR), with that use continuing for students who visited the office of Student Advising Services (SAS) for advisement.

It was only used in the event that a student visited or otherwise contacted SAS for advisement; there was no advance population of the CP based on student major, for example. It was not used by all areas of the college, or for all students; faculty and peer advisors did not use the CP at all, nor did other advising areas of the College (ASAP, College Discovery). Students did not have access to manipulate the CP, nor to create their own plan within the CP. Despite its lack of uniform use, the CP did receive heavy use in SAS, with no issues beyond the normal and expected.

DegreeWorks Upgrades and SEP

During the summer of 2017, CUNY announced that DegreeWorks would be undergoing significant updates and that the CP would be going away, replaced by the Student Educational Planner (SEP). Due to significant technical issues during this transition, including the possibility that the SEP would not be available during peak fall advising, LaGuardia secured confirmation that the CP would remain available for the fall semester, but that it would not be able to migrate to the SEP once that did become available.

This was less than desirable, but at least ensured that advising could continue as before. During the fall semester, however, the SEP did become available and appeared stable, so the decision was made locally to shift all advising in SAS from the CP to the SEP. This was predicated on the lack of migration ability from the CP, allowing for consistency, as well as a desire to stress test the system at scale – the more users we had, the more quickly we could surface issues and get them addressed.

Integrating Curriculum Maps

To this point, no program templates had been developed or used in either the CP or the SEP. All use of planners had consisted of adding individual courses to the term in question. Degree or curriculum maps were not part of the DegreeWorks usage. In the year prior to this process, LaGuardia had been engaged in multiple degree map projects. First, Academic Affairs was working with individual
programs to identify and remove hidden prerequisites. This remains a work in progress. At the same
time, an effort was being made to create flexible degree maps, maps that would provide a guided
pathway for students who enter with some level of remediation. Remediation needs make two-year
completion a challenge, but there was no structured guidance to ensure they finished in three years;
it was two years, or off-track, despite them being on the track they were placed on, whether through
remediation or hidden prerequisites. Most recently, more comprehensive two-year degree maps
have begun being created for each program, as part of the 30-Credit Momentum project.

Into this conversation, the move to the SEP introduced the question of templates. Ideally, using the
complete and accurate curriculum maps to develop templates for the SEP would ensure that advising
would be consistent, and students would have their course selection mapped out for the time of their
degree. Unfortunately, this has proved to be challenging, for at least two basic reasons. First, the SEP
has remained a challenge technically. We did not have access to develop templates until late
January/early February 2018. Technical stability issues remain a challenge as we have moved
forward, although less so.

More significantly, however, are the challenges in practical application. Systemically, there are the
limitations of the templates:

1) Templates in the SEP are specific to start term, meaning that they need to be updated every
semester for each new incoming group of students. There is not a generic template that can
be pulled for Business Administration, for example, that can be applied no matter the start
term for the student. There is a fall start template, and a spring start template, each of which
need to be updated annually for the incoming cohort.

2) SEP manipulation is challenging with the template. If, for example, the template has ENG 101
in the first semester, and the student needs remediation in that term, or fails the course, or
simply doesn’t take it, moving the course in the SEP requires either moving or inserting the
necessary courses into the appropriate terms, as well as moving each individual class that is
subsequent to that course – ENG 102, in this case – as well as potentially for all of the other
courses in a given term, in order to make space for the adjustment. For math or science
courses, heavily sequential in nature, this can be a very time consuming process for an
advisor, and leaves room for error, since none of the adjustments can be automated.

3) The SEP does not recognize equated credits, creating confusing credit totals in the plan for
students who are referring back without an advisor.

4) Reporting on the SEP reports whether the student’s registration matches the SEP – not
whether the SEP is correct as per degree audit. So, if there is an error, or, if a student has
access to change the plan, and then registers for things that are incorrectly in the SEP, or if the
student simply registers for things that they were not advised to take, there will be no alert capability to tell the advisor that the student is off-track or that something is amiss.

5) There was discussion around different templates for differing remediation needs and start points. With 60+ programs of study, just having a two-year template and a single flexible template for each program would require development of 120 templates, each of which would need a version for the fall and the spring, generating 240+ templates that would need to be updated annually.

6) Throughout the course of implementing the pilot laid out below, technical issues have continued when using the template, including lost terms, failure to save correctly, and issues in moving courses within the template. None of these problems have manifested in the same way when using the SEP without the templates.

We also have encountered challenges to using the SEP in our advising structures. At LaGuardia, we have multiple points of advising: NSAR, for incoming students; First Year Seminar (FYS), generally for students in their first term, but possibly at other points; ASAP and College Discovery; and our post-FYS advising structure, which is under revision now. We are moving to our Advising 2.0 structure, which assigns students with the highest need to a professional advisor caseload (need level being determined by a set of criteria), students with some need being assigned to faculty and peer advisors; and students with the least need being able to use advising services around the campus, but who are not specifically paired to an advisor. Some of the questions that emerged were:

1) How do we incorporate this tool in such a way that its use will be consistent? What are the handoffs and expectations between advising areas and structures? Is there a common philosophy of advising that is consistently held and applied?

2) Is it an advising tool – a tool that an advisor uses to lay out the best path, then locks, and can be used for assessment, determining whether the student is on track, and as a record for appeals processes? What gaps exist if we do not lock it?

3) Or, is it a planning tool, a tool that the student can access and manipulate, use to take ownership of their planning process, and generally play with?

We have had to try to bridge a general desire to give students the entire map in the template, the technical limitations of the tool, and the challenges of usage in the various areas of advisement. We are still working on tying all of this together, but for the fall 2018, we are using the SEP broadly, and templates narrowly, as part of that process.
**Piloting and Implementation**

We started with a few basic parameters. We wanted to pilot the use of templates with our Business and Technology department programs only – four programs. We wanted to use one template per program, rather than two, to simplify maintenance. We wanted to make sure the full 60 credits were in the template, but in such a way that maneuvering them would not cause delays or errors. And we wanted the plans locked for students, both for record-keeping integrity and to minimize variables while we measure the stability of the process and the tool. We attempted to begin the pilot for the spring semester advising, but SEP issues only made templates available very late in the process. To start, in order to advise for the fall 2018 semester, we approached it thus:

1) As noted, starting with a limited number of programs. Business Administration, Accounting, Paralegal, and Travel, Tourism & Hospitality Management. Templates will be used for incoming first-time students only – no transfers or continuing students.

2) Templates were developed for each, with the plan that for triple-exempt students, the template would be used with the correct start term. For students with remedial needs, the start term would be a later date (i.e., fall 2019), allowing advisors to insert basic skills courses in prior to that term, and pull forward any credit-bearing courses that can apply, without having to restructure the whole sequence.

3) A standard practice was developed so that we do not have to change protocols during peak times. Advisors who meet with students during NSAR will upload the template, will use our Enhanced Advising Form to provide the student to register for classes, and complete the first semester’s advising in the SEP with the student, if the student has no remediation needs. If the student does have remediation needs, the advisor will complete the Enhanced Advising Form, and within 24-48 hours, a member of our Advising Operations team will upload the template in the SEP and complete the basic skills sequences and all courses for the semesters necessary to complete the basic skills requirements.

4) In the fall, these students will be seen by FYS faculty, professional staff, or program advisors (ASAP/CD) who will unlock and update the SEP for the following term. In some cases, these may be unlocked by advisors, allowing students to update their next term plan, to be reviewed by the advisor and relocked (under review as of summer 2018).

5) All new, non-pilot students will have their advising completed at NSAR in the SEP without the template, using the prior method of simply advising the coming semester course selection, and locking the SEP until the first term advisor takes over.
Pilot Evaluation

This pilot was deemed a failure owing to technology issues, lack of scalability, and the potential for a very high error rate.

From a technology standpoint, there are still issues with saving completed SEPs. It is also not an intuitive or responsive software, meaning that for programs and student populations with as many variables as we have at LaGuardia, it simply cannot keep up. With a full 60 credits loaded into the SEP, any change – a course failure, withdrawal, or simply non-registration – throws off the sequence for any and every subsequent semester, all of which must be manipulated manually. For students with remediation needs, this lack of responsiveness also means that simply entering the template is a challenge. On the front end of the process, a member of Advising Operations completed templates for every incoming student in the selected programs with a remediation need, at approximately 10 minutes per template (assuming no errors, crashes, or failures to save). Each of these was then checked by another member of the Advising Operations team, who also checked all of the triple exempt templates created by the advisors in NSAR. At scale, this would be a massive workload issue. With the intent of FYS instructors using these completed SEPs in their classes for advisement – they would unlock the SEP, the student would make any manipulations needed, and the FYS instructor would check to make sure it was correct before locking it again – the faculty lack of comfort with the tool and the lack of student access to editing (controlled at Central), meant that the error rate was going to be enormous, given how high it was for experienced advisors.

We have decided to use the templates in a more limited form, however. The plan for the fall of 2019 is to use 30-credit templates, based on the new and in-progress curriculum maps, for triple exempt new students on the way in. Using this limited context reduces the potential for error, reduces the need for manipulation, and reduces the number of templates to create and maintain. As we move new student advising online, this will allow us to preload the first year for these students quickly, while we manually plan the first year for students with remediation needs – a faster process from scratch than it is by moving around template pieces. These pilots and assessments have been discussed and decided on across all parts of the advising structures, through the Advising Technology Committee.

Creation of the Advising Technology Committee at LaGuardia Community College

In summer 2017, as the DegreeWorks conversations were ramping up, the dean overseeing IT and IS, and the dean overseeing advising services and the Registrar’s office, began to meet regularly in order to ensure that CUNY’s changes to that system were being managed across campus and functions. By August, this had evolved to a larger committee, in an effort to ensure that the necessary voices and
decision-makers were in the room. Information Technology, Student Affairs, Academic Affairs, and Marketing & Communications were all key stakeholders in the changes to, use of, and dissemination to students of, the DegreeWorks changes, upgrades and tools.

By early fall, this had expanded again. Special programs like ASAP, College Discovery, and Edge, were all incorporated into the team, and the conversation now ranged beyond what was not working in DegreeWorks that week. At LaGuardia Community College, we use a number of technologies in or around our advising processes, beyond DegreeWorks: CUNYfirst, SEMS, Connect to Complete, Hobsons Retain/MyLaGuardia, Web Attendance, Data Store, our Appointment application, and ePortfolio. All of these tools intertwine, so it was critical to review how they were used, worked, and integrated on a regular basis. This is now the Advising Technology Committee, and it has proven to be instrumental in managing the volume of systems and the disruption of those systems at various times. There are two central tenets to this committee and the bi-weekly meetings:

1) All relevant voices are in the room: all IT team/project leaders, so that each piece of technology has support and knowledge in the room; from Student Affairs, Student Advising Services, Advising Operations, Registrar, and the Special Programs; from Academic Affairs, faculty advising, First Year Seminar, the Center for Teaching and Learning, and Peer Advising Academy; and Marketing & Communications for how each tool will be taught and supported in messaging.

2) There are decision-makers in the room from all areas. The committee is headed by associate deans for IT and SA, as well as the Associate Provost. As questions and issues arise, we are able to address them directly and immediately, an enormous help in dealing with rapidly changing situations in some of these tools. If all three are not able to be present, the meeting is generally rescheduled.

The format is consistent. We go through existing tickets and problems relating to DegreeWorks, review our pilot process, and discuss changes/updates/issues. IT leaders provide updates on any technology, and then we walk through the list to see if there are any questions or issues pending or upcoming. The focus is also consistent — raise necessary issues immediately, and resolve decisions immediately. Having this committee has helped us dramatically in coordinating our efforts on using technology to support student advisement and enrollment.
VI: APPENDICES

APPENDIX A: CUNY Degree Mapping Working Group Members
APPENDIX B: Sample Degree Maps
APPENDIX C: Sample Process Approaches
APPENDIX D: EVC Hidden Prerequisites Memo
APPENDIX E [1]: Degree Map Document for CSI’s BA in History
APPENDIX E [2]: List of CSI’s Degree Map Templates in DegreeWorks
APPENDIX E [3]: DegreeWorks “Calendar” View of Degree Map for CSI’s BA in History
APPENDIX E [4]: DegreeWorks “Audit” View (It shows how the courses from the Calendar view meet the degree requirements)
APPENDIX F: Sample Text for Presenting/Marketing Degree Maps and Academic Plans
APPENDIX G: Sample Marketing Material
APPENDIX A: CUNY Degree Mapping Working Group Members

Lucinda Zoe, Senior University Dean and Vice Provost for Academic Programs & Policy, Central Office (Chair)
Veronica DiMeglio, Curriculum Coordinator, College of Staten Island
Bart Grachan, Associate Dean for Progress & Completion, LaGuardia Community College
Kim Holland, International Education Manager, Central Office
Karen Kapp, University Director of Academic Planning and Administration, Central Office
Isabel Li, Director of Academic Learning Center, Hostos Community College
Tatiana Mejic, Deputy University Registrar, Central Office
Kenneth Norz, University Academic Affairs Director, Central Office
Gladys Palma de Schrynemakers, Assistant Vice President/Associate Provost, Medgar Evers College
Jesus Perez, Director, Center for Academic Advisement & Student Success, Brooklyn College
Carei Thomas, Director of Academic Advisement and Transfer Center, BMCC
Vivek Upadhyay, University Executive Registrar, Central Office
Olga Vega, Project Manager, Central CIS, Central Office
Mari Watanabe, Director of Undergraduate Education Initiatives & Research, Central Office
Theresa Williams, ASAP Director for STEM Initiatives & Special Programs, Central Office

CUNY Advisement Council
CUNY DegreeWorks Council
APPENDIX B: Sample Degree Maps

FALL
- STAT 211: Introduction to Statistics (3 CR)
- ENGL 120: Expository Writing (3 CR)
- PSYCH 106: Intro to Psychology (3 CR)
- CHEM 100: Essentials of General Chemistry Lecture (3 CR)
- CHEM 101: Essentials of General Chemistry Lab (1 CR)
- ENGR 250: Introduction to Engineering (3 CR)
- HIST 101: World History (3 CR)
- HUMANITIES 101: Introduction to Humanities (3 CR)
- MATH 101: College Algebra (3 CR)
- PHYS 101: General Physics I (3 CR)
- RELIGION 101: Introduction to Religion (3 CR)
- SOCIETY 101: Introduction to Sociology (3 CR)

SPRING
- ENGL 220: Intro to Writing About Literature (3 CR)
- ENGR 250: Introduction to Engineering (3 CR)
- PSYCH 106: Intro to Psychology (3 CR)
- CHEM 100: Essentials of General Chemistry Lecture (3 CR)
- CHEM 101: Essentials of General Chemistry Lab (1 CR)
- ENGR 250: Introduction to Engineering (3 CR)
- HIST 101: World History (3 CR)
- HUMANITIES 101: Introduction to Humanities (3 CR)
- MATH 101: College Algebra (3 CR)
- PHYS 101: General Physics I (3 CR)
- RELIGION 101: Introduction to Religion (3 CR)
- SOCIETY 101: Introduction to Sociology (3 CR)

FRESHMAN
- ENG 110: English Composition I (3 CR)
- MTH 101: College Algebra (3 CR)
- PSYCH 106: Intro to Psychology (3 CR)
- CHEM 100: Essentials of General Chemistry Lecture (3 CR)
- CHEM 101: Essentials of General Chemistry Lab (1 CR)
- ENGR 250: Introduction to Engineering (3 CR)
- HIST 101: World History (3 CR)
- HUMANITIES 101: Introduction to Humanities (3 CR)
- MATH 101: College Algebra (3 CR)
- PHYS 101: General Physics I (3 CR)
- RELIGION 101: Introduction to Religion (3 CR)
- SOCIETY 101: Introduction to Sociology (3 CR)

FALL
- Major Elective (MAJOR REQUIREMENT) (3 CR)
- Foreign Language II (3 CR)
- Liberal Arts Elective (ELECTIVE REQUIREMENT) (3 CR)
- Life and Physical Sciences (3 CR)
- Natural Science Lecture Course (3 CR)

SPRING
- Major Elective (MAJOR REQUIREMENT) (3 CR)
- Foreign Language II (3 CR)
- Liberal Arts Elective (ELECTIVE REQUIREMENT) (3 CR)
- Life and Physical Sciences (3 CR)
- Natural Science Lecture Course (3 CR)

*Free Electives can be any business, liberal arts, or public affairs course
APPENDIX C: Sample Process Approaches

Building Academic Maps
(Lawrence Abele, labele@fsu.edu, 2018)

The exercise of building academic maps should begin with a discussion with the faculty governing body of the institution so that everyone understands that the process is not making any changes to the curriculum established by the faculty. The faculty may decide to engage in the actual process of building the maps or have staff build the maps and returned to the faculty for discussion and approval. The faculty should approve all academic maps.

Academic maps begin with the requirements established by the faculty and published in the institution’s catalog or bulletin. These requirements are then reformatted into a term-by-term sequence of courses required to complete the degree in two or four years. This helps students understand how degree requirements can be translated into a term-by-term registration plan.

NOTE: THE MAPS WILL NOT BE EFFECTIVE UNLESS THE STUDENTS’ PROGRESS AND COMPLETION OF MILESTONE COURSES ARE MONITORED AND FOLLOWED UP WITH INTRUSIVE ADVISING.

Essential Elements

- Narrative explaining how to read and use this map and the consequences of not following it. Description of selected major or area of interest.
- List of specific courses by name (and code if used during registration) for each academic term resulting in a Two- or Four-Year Graduation Plan.
- English and mathematics in first term.
- Sufficient credits selected each term leading to graduation in two or four years. Typically 15.
- Specific milestone course(s) or actions that must be taken in that specific academic term in order to graduate within two or four years.

Steps to Build Academic Maps
Organize a meeting with your academic advisors or with faculty teams and select a program and walk through these steps:

1. Select a format that is easy to read and understand. Strike a balance between ease of use and including too much information. There are many different formats selected by different institutions, and a web search will provide lots of examples.
2. Open institution catalog to the desired major and be sure to list the prerequisites for the major courses.
3. List any special conditions for admission to the major.
4. Sophisticated software and/or technology are not necessary; you can begin with paper and pencil.
5. Identify and list English and mathematics in the first term.
6. Identify and list major courses required in each term.
7. Identify the Milestone courses or actions by term. These are courses or actions that MUST be completed in that particular term in order to graduate on time.
8. Have the faculty determine how many times a milestone course can be dropped and/or failed (earned less than a required grade) before a change in major is required. Many institutions allow two attempts, but some allow only one and others as many as three.

9. Keep a running tally of Milestone courses by major, because many majors will require the same Milestone courses.

10. Examine each required course to determine if it also meets a general education requirement and/or any other institutional competencies.

11. Sequence the general education courses to be completed in four or six terms, depending on whether the map is for a two- or four-year program.

12. Highlight placeholders in terms where electives may be inserted. This allows the student to meet with a faculty member and/or an advisor to explore courses of interest. There will be opportunities for electives in even the most prescribed majors, e.g., engineering. However, caution is needed here as the more choices a student has, the higher the probability of the student enrolling in a course that does not count toward graduation.

13. Remember to schedule at least 15 credit hours per term to target graduation in two or four years. Don’t be concerned about assigning 15 hours as there are good data showing that students at all levels of academic preparation perform better taking 15 hours.

14. List potential job titles and employment data for graduates in this field. There are free websites that will assist in this.

15. Evaluate and discuss at every step in the process, and keep everyone informed.

16. Write a narrative explaining how to read and use the map. Have a range of students review the narrative. What might be very clear to us may not be clear to an 18 year-old right out of high school or an older student returning to school.

17. The maps are not complete until the appropriate faculty has approved each one.
APPENDIX D: EVC Hidden Prerequisites Memo

July 20, 2016

From EVC Vita C. Rabinowitz

To: CAOs

I write to alert you to a potential problem in how prerequisite courses for degree requirements are presented in course catalogues and other publications and communications. This matter has come to my attention in the context of an ongoing Tuition Assistance Program (TAP) audit at CUNY.

To avoid penalties and fines in a TAP audit, it is essential that colleges maintain full transparency regarding the full requirements for each degree and ensure they are reflected in all versions of the college course catalogue and program descriptions. Clear and complete statements of degree requirements would also satisfy disclosure requirements concerning degree programs as stated in the Higher Education Opportunity Act of 2008. Of course, transparency in degree requirements will also help avoid confusion among students and advisers and allow students to make more informed decisions in selecting majors and course schedules.

I advise you to appoint a member of your staff to work with academic departments at your college to review their programs to ensure that any hidden prerequisites are revealed and clearly identified in the catalogues.

As a handy reminder, below are the requisite definitions:

• A pre-requisite is a class the student must take prior to the course in question.
• A concurrent requisite is a class a student is required to take during the same semester as the course in question.
• A co-requisite is a class that the student can take either prior to or concurrently with the class in question.
• There are to be no “hidden” prerequisites in listing program requirements. If a major course has a prerequisite, it automatically becomes part of the program requirements and the credits are added to the total credits for the major.

In addition to the issue of hidden prerequisites, in accordance with the Board policy of 2011 on Creating an Efficient Transfer System, any course or disciplinary area that is required of all students and is not specifically required for a student’s major must fall within the Common Core or College Option courses. This means that any specific required course must fall within either General Education (including the Common Core and College Option) or major requirements. All other courses are free electives.
• Degree requirements in the catalogues must clearly state both GenEd and major requirements. The same course may satisfy both a major and a Pathways requirement. With the exception of relatively rare cases in which an academic program has received a waiver to specify a course in Pathways (typically due to accreditation or licensure requirements, in programs without free electives), the course must be included as a major requirement. In Pathways it may be listed with an asterisk, indicating that students pursuing this major are strongly advised to choose this particular course as it would satisfy both requirements.

• The description must specify the number of GenEd, major and free electives and provide the total number (or range) of credits in each category, as well as the total number of credits to the degree. In the past, some departments have listed different types of requirements without considering them as a whole; indeed, there have been cases in which it has been mathematically impossible to complete the degree within the number of credits set forth by the Board 60/120 policy. In such cases, the curriculum will need to be revised. In exceptional cases, mainly in programs leading to accreditation or professional licensure and including no free electives, a waiver of the Board policy may be requested.

• In listing prerequisites for courses, only the immediate prerequisite should be specified for each course (not the whole list of courses that feed into one another).

• If there are prerequisite courses that may be waived due to the student’s previous experience (e.g., Span 101, 102, and 201 are waived if a student has had previous language experience), then they must still be listed as part of the program requirements and the hours must be added into the total program hours. There must be a statement indicating that the prerequisites can be waived, explaining the eligibility for such a waiver, and indicating the adjustable range in both the requirement area and general electives unless those credits must be fulfilled through more advanced coursework in which case those advanced requirements must be articulated.

In some cases, the task of the department will consist solely of presenting the existing requirements in a more clear and transparent way.

In other cases, a review and adjustment of degree requirements may be necessary, such as eliminating a prerequisite requirement, reducing the number of free electives to accommodate new major requirements, reducing the number of credits in the major or adding a course to the College Option. Any changes must be published in the Chancellor’s University Report (CUR) prior to their implementation. We expect the review and any applicable local governance approvals to be completed before the end of the next academic year so that such changes may be entered into the CUR no later than Spring 2017, which would allow the revised degree requirements to appear in the 2018 catalogues.

Please do not hesitate to call Dr. Ekaterina Sukhanova or Mr. Kenneth Norz at my office (646-664-8054) for assistance with these initiatives if needed, or with presenting the revised information in the CUR. Thank you very much for your attention to this important matter.
APPENDIX E [1]: Degree Map Document for CSI’s BA in History

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<thead>
<tr>
<th>Year One - First Semester</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ENG 111 (RECR) (RLA)</td>
<td>3</td>
</tr>
<tr>
<td>COR 100 (FUSR) (RLA)</td>
<td>3</td>
</tr>
<tr>
<td>MTH 102 (RMQR) (RLA)</td>
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<tr>
<td>MUS 100 (FCER) (RLA)</td>
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<tr>
<td>112-LEVEL LANG (FWGR) (RLA)</td>
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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>ENG 151 (RECR) (RLA)</td>
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</tr>
<tr>
<td>HST 100 (FISR) (RLA)</td>
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<tr>
<td>AST 102 (RLPR) (RLA)</td>
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<tr>
<td>AST 103 (COPR) (RLA)</td>
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<tr>
<td>LIB 102 (Elective)</td>
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<tr>
<td>114-level lang. (COPR) (M) (RLA)</td>
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<thead>
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<tbody>
<tr>
<td>213-LEVEL LANG. (M) (RLA)</td>
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<tr>
<td>200-level TALA (P&amp;D) (RLA)</td>
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</tr>
<tr>
<td>SIXTH FLEXIBLE CORE (RLA)</td>
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</tr>
<tr>
<td>HST 200-level (M) (RLA)</td>
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<thead>
<tr>
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<th>Credits</th>
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</thead>
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<tr>
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<tr>
<td>HST 200 (M) (RLA)</td>
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<tr>
<td>Scientific World (FSWR) (RLA)</td>
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</tr>
<tr>
<td>Scientific World Laboratory (RLA)</td>
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</tr>
<tr>
<td>ELECTIVE (RLA)</td>
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<table>
<thead>
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<th>Credits</th>
</tr>
</thead>
<tbody>
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<td>*HST 200-level or higher (Pre-1700) (RLA)</td>
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</tr>
<tr>
<td>*HST 200-level or higher (Modern Europe) (RLA)</td>
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<tr>
<td>ELECTIVE (RLA)</td>
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</tr>
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<table>
<thead>
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<tbody>
<tr>
<td>*HST 200-level or higher (United States) (RLA)</td>
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</tr>
<tr>
<td>*HST 200-level or higher (World History) (RLA)</td>
<td>4</td>
</tr>
<tr>
<td>ELECTIVE</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total Credits:</strong></td>
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<table>
<thead>
<tr>
<th>Year Four - First Semester</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>HST 300 (M) (RLA)</td>
<td>4</td>
</tr>
<tr>
<td>*HST 200-level or higher (M) (RLA)</td>
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</tr>
<tr>
<td>ELECTIVE</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total Credits:</strong></td>
<td><strong>15</strong></td>
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<table>
<thead>
<tr>
<th>Year Four - Second Semester</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HST 401 (M) (RLA)</td>
<td>4</td>
</tr>
<tr>
<td>ELECTIVE</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total Credits:</strong></td>
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</tr>
</tbody>
</table>

*NOTE: In addition to HST 300, 12 credits in HST courses at the 300-level are required.


Liberal Arts and Science Requirement: 90 credits
Total Credits Required: 120
APPENDIX E [2]: List of CSI’s Degree Map Templates in DegreeWorks

<table>
<thead>
<tr>
<th>Description</th>
<th>Level</th>
<th>College</th>
<th>Major</th>
<th>Degree</th>
<th>Catalog Year</th>
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<tbody>
<tr>
<td>BUS-AAC5_1YPFALL</td>
<td>U</td>
<td>CSI</td>
<td>BUS-B5</td>
<td>BS</td>
<td>2010-2019</td>
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</table>
APPENDIX E [3]: DegreeWorks “Calendar” View of Degree Map for CSI’s BA in History

HISTORY FOUR YEAR/EIGHT SEMESTER PLAN FOR 2018-2019 DEGREE MAP PROJECT

Degree: Associate in Arts
Level: Undergraduate

### 2018-2019 Undergraduate

<table>
<thead>
<tr>
<th>FALL 2018, Total Credits: 16.0</th>
<th>SPRING 2019, Total Credits: 14.0</th>
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</thead>
<tbody>
<tr>
<td><strong>ENG 111</strong> 3.0</td>
<td><strong>ENG 151</strong> 3.0</td>
</tr>
<tr>
<td><strong>COR 100</strong> 3.0</td>
<td><strong>LIB 102</strong> 1.0</td>
</tr>
<tr>
<td><strong>MTH 102</strong> 3.0</td>
<td><strong>MUS 100</strong> 3.0</td>
</tr>
<tr>
<td><strong>HST 100</strong> 3.0</td>
<td><strong>ASL 112 or CHN 112 or FRN 112 or ITL 112 or SPN 112 or ARB 112</strong> 3.0</td>
</tr>
<tr>
<td><strong>BIO 106</strong> 3.0</td>
<td><strong>AST 100 and AST 101</strong> 4.0</td>
</tr>
<tr>
<td><strong>BIO 107</strong> 1.0</td>
<td>Overall GPA - Student System 2.000</td>
</tr>
<tr>
<td>Overall GPA - Student System 2.000</td>
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</tr>
</tbody>
</table>

### 2019-2020 Undergraduate

<table>
<thead>
<tr>
<th>FALL 2019, Total Credits: 15.0</th>
<th>SPRING 2020, Total Credits: 15.0</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ENH 210</strong> 4.0</td>
<td><strong>HST 200</strong> 4.0</td>
</tr>
<tr>
<td><strong>HST 299</strong> 4.0</td>
<td><strong>SOC 240</strong> 4.0</td>
</tr>
<tr>
<td><strong>ASL 114 or CHN 114 or FRN 112 or ITL 112 or SPN 114 or ARB 114</strong> 4.0</td>
<td><strong>ART 100</strong> 3.0</td>
</tr>
<tr>
<td><strong>FOVWG 1000 or FCIS 1000 or FCIS 1000 or FCSV 1000 or FCUS 1000</strong> 3.0</td>
<td><strong>ASL 213 or CHN 213 or FRN 213 or ITL 213 or SPN 213 or ARB 213</strong> 4.0</td>
</tr>
<tr>
<td>Overall GPA - Student System 2.000</td>
<td>Overall GPA - Student System 2.000</td>
</tr>
<tr>
<td>Milestone</td>
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</tbody>
</table>
### 2020-2021 Undergraduate

<table>
<thead>
<tr>
<th>Fall 2020, Total Credits: 15.0</th>
<th>Spring 2021, Total Credits: 15.0</th>
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</thead>
<tbody>
<tr>
<td>* HST 212</td>
<td>SOC 225</td>
</tr>
<tr>
<td>* HST 272</td>
<td>PHL 130</td>
</tr>
<tr>
<td>SOC 212</td>
<td>* Selected: HST 386</td>
</tr>
<tr>
<td>ANT 100</td>
<td>* Selected: HST 315</td>
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<tr>
<td>* Major GPA</td>
<td>* Overall GPA - Student System</td>
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<td>2.000</td>
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### 2021-2022 Undergraduate

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<thead>
<tr>
<th>Fall 2021, Total Credits: 15.0</th>
<th>Spring 2022, Total Credits: 15.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>* HST 300</td>
<td>HST 401</td>
</tr>
<tr>
<td>PHL 101</td>
<td>INT 203</td>
</tr>
<tr>
<td>INT 200</td>
<td>PCL 103</td>
</tr>
<tr>
<td>* Selected: HST 305</td>
<td>PHL 215</td>
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<tr>
<td>* Overall GPA - Student System</td>
<td>Overall GPA - Student System</td>
</tr>
<tr>
<td></td>
<td>2.000</td>
</tr>
</tbody>
</table>

Milestone
APPENDIX E [4]: DegreeWorks “Audit” View (It shows how the courses from the Calendar view meet the degree requirements)
Understanding your academic plan

This is your academic plan: a term-by-term list of courses to guide you to your degree in four years. You will save tens of thousands of dollars by completing your degree in four years. You should register for 15 hours each term or 30 hours over a year. Data show that students who take 15 hours, regardless of their academic strength, do better than those taking fewer hours.

Earning a degree requires that you complete (1) the General Education requirements of the university as well as (2) any requirements of your college, such as a foreign language, and (3) the requirements of your major. The Minimum Recommended Grade shown is the grade earned by those students with the highest probability of grading in this major. Milestones or Critical Actions are courses or actions that MUST be completed that term in order to graduate in four years. The first time you do not successfully complete a Milestone course or the required action, you will meet with an advisor and develop a plan to get back on your map. The second time you will be asked to change your major.

Pay close attention to the General Education requirements when meeting with your advisor. The General Education areas are listed but not specific courses as sometimes as many as 10 different courses will fulfill a single requirement and sometimes a course may fulfill both a major and a General Education requirement. Where Elective is listed it means that you may take a course of your choosing.
APPENDIX G: Sample Marketing Material

The Degree Mapping and Student Services Information (Pocket friendly brochure)

The purpose of this pocket friendly brochure is to provide students with pertinent information about their course of study, school processes, and student services available to help them navigate their first year and beyond.

This pocket friendly brochure is just a visual overview of what academic life will look once they are admitted. If students need more information, they will be required to consult the school catalog or be refer to an Academic Advisor.

FRONT

The pocket friendly brochure provides students (new and/or transfer) with the following sections:

- a checklist of all the necessary steps they need to take from admissions to registration (e.g., application for admission, testing, immunization, financial aid)
- Math score results and math course placement
- Writing and reading score results and writing and reading course placement
- A directory with the contact information and room numbers for all the different offices useful to students during their academic life
- Important information for student academic success (GPA requirement, attendance policy, student code of conduct and grading).

BACK

- Pathways requirement: Required Common Core and Flexible Common Core
- A degree map will be provided to student based on their area of study.
- Information pertaining to eligibility for graduation, applying for graduation, and eligibility for commencement will also be included.
PATHWAYS – Liberal Arts and Sciences (A.A.)

**REQUIRED COMMON CORE**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>English Composition</td>
<td>6</td>
</tr>
<tr>
<td>Mathematical and Quantitative Reasoning</td>
<td>3</td>
</tr>
<tr>
<td>Life and Physical Sciences</td>
<td>3</td>
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**FLEXIBLE COMMON CORE**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>World Cultures and Global Issues</td>
<td>3 credits</td>
</tr>
<tr>
<td>US Experience in Diversity</td>
<td>3 credits</td>
</tr>
<tr>
<td>Creative Expression</td>
<td>3 credits</td>
</tr>
<tr>
<td>Individual and Society</td>
<td>3 credits</td>
</tr>
<tr>
<td>Scientific World</td>
<td>3 credits</td>
</tr>
<tr>
<td>One (1) additional course from the FLEXIBLE COMMON CORE</td>
<td>3 credits</td>
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**FIRST SEMESTER**

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>English Composition</td>
<td>3</td>
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<tr>
<td>Mathematical and Quantitative Reasoning</td>
<td>3</td>
</tr>
<tr>
<td>FLEXIBLE COMMON CORE COURSE</td>
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<tr>
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**ELIGIBILITY FOR GRADUATION**

<table>
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<tbody>
<tr>
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**SECOND SEMESTER**

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<td>Life and Physical Science</td>
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<tr>
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**APPLYING FOR GRADUATION**

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**THIRD SEMESTER**

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<tr>
<td>Requirements/Electives</td>
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<tr>
<td>Curriculum/Major/Program</td>
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<tr>
<td>Requirements/Electives</td>
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<tr>
<td>Curriculum/Major/Program</td>
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<td>Requirements/Electives</td>
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<tr>
<td>Curriculum/Major/Program</td>
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**ELIGIBILITY FOR COMMENCEMENT**

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**FOURTH SEMESTER**

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<tr>
<td>Requirements/Electives</td>
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<td>Curriculum/Major/Program</td>
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<td>Requirements/Electives</td>
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<td>Curriculum/Major/Program</td>
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<td>Requirements/Electives</td>
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<tr>
<td>Curriculum/Major/Program</td>
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<tr>
<td>Requirements/Electives</td>
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**IMPORTANT INFORMATION FOR STUDENT**

<table>
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<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
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**TOTAL** 60 credits