Condensed Self-Study Report of Northeastern University

Northeastern University

Bouve College of Health Sciences, School of Pharma

140 The Fenway

Boston

Massachusetts - 01907

Submitted to the Accreditation Council for Pharmacy Education 3/20/2015 at 10:15 a.m. Eastern time
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Pharmacy College or School Profile

Northeastern University

Northeastern University / Bouve College of Health Sciences, School of Pharma
140 The Fenway
Boston
Massachusetts - 01907

Departmental/Divisional Structure

Pharmaceutical Sciences (PharmSci)
Pharmacy and Health Systems Sciences (PHSS)

Branch/Distance Campus

Main Campus

President Information

Not Available

Provost Information

Not Available

Dean Information

Not Available
Northeastern University / Bouve College of Health Sciences, School of Pharma

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Organizational structure change

Curricular revision

Maturing of the faculty
Northeastern University / Bouve College of Health Sciences, School of Pharma

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1. College or School Mission and Goals

The college or school of pharmacy (hereinafter "college or school") must have a published statement of its mission, its goals in the areas of education, research and other scholarly activities, service, and pharmacy practice, and its values. The statement must be compatible with the mission of the university in which the college or school operates. These goals must include fundamental commitments of the college or school to the preparation of students who possess the competencies necessary for the provision of pharmacist-delivered patient care, including medication therapy management services, the advancement of the practice of pharmacy and its contributions to society, the pursuit of research and other scholarly activities, and the assessment and evaluation of desired outcomes.

2. College or School's Self-Assessment

| The college or school has a published statement of its mission; its long-term goals in the areas of education, research and other scholarly activities, service, and pharmacy practice; and its values. | Satisfactory |
| The mission statement is compatible with the mission of the university in which the college or school operates. | Satisfactory |
| The college or school's vision includes the development of pharmacy graduates who are trained with other health professionals to provide patient care services as a team. | Satisfactory |
| The college or school's vision and long-term goals include fundamental commitments of the program to the preparation of students who possess the competencies necessary for the provision of pharmacist-delivered patient care, including medication therapy management services, the advancement of the practice of pharmacy and its contributions to society, the pursuit of research and other scholarly activities, innovation, quality assurance and continuous quality improvement, and the assessment and evaluation of desired outcomes. | Satisfactory |
| The college or school's vision and goals provide the basis for strategic planning on how the vision and goals will be achieved. | Satisfactory |
| For new college or school initiatives, e.g., branch campus, distance learning, or alternate pathways to degree completion, the college or school ensures that: | Satisfactory |
| • the initiatives are consistent with the university's and the college or school's missions and goals | |
| • the same commitment to the instillation of institutional mission and academic success is demonstrated to all students, irrespective of program pathway or geographic location | |
| • resources are allocated in an equitable manner | |

3. College or School's Comments on the Standard

**Focused Questions**

- ☑ How the college or school's mission is aligned with the mission of the institution
- ☑ How the mission and associated goals address education, research/scholarship, service, and practice and provide the basis for strategic planning

Northeastern University / Bouve College of Health Sciences, School of Pharma
The School of Pharmacy is dedicated to excellence in pharmacy-related education, research and service, including the provision of patient care. We prepare students with knowledge, skills and values for careers in pharmacy practice and the pharmaceutical sciences. Our programs promote intellectual growth, professionalism, and lifelong learning. The school contributes to improved individual and population health through the generation and dissemination of new knowledge and through scholarship and community service.

OUR VISION

Northeastern University School of Pharmacy will:

- Secure a national and international reputation for excellence and quality in all of the school’s disciplinary areas;
- Be recognized for excellence and distinction in the delivery of professional and interprofessional education that integrates campus-based learning and experiential education;
- Advance the profession of pharmacy through leadership and engagement; and
- Be a highly sought-after school in which to learn, work and conduct interdisciplinary scholarship in the areas of patient care and science.

The mission and vision statements for the School of Pharmacy (Appendix 1.1.1) are available to all stakeholders on the school’s website (http://www.northeastern.edu/bouve/pharmacy/ under the “About” section). The Bouve College of Health Sciences (BCHS) mission and vision (Appendix 1.2.1) can be found at http://www.northeastern.edu/bouve/about/. Northeastern University’s mission (Appendix 1.2.2) is available at http://www.northeastern.edu/ataglance/mission.html (Q4).

School’s mission has not changed since 2008. At that time the mission was developed during SOP meeting by all of the faculty. Mission was then shared with groups of alumni and students for additional feedback and when finalized, it was shared with all stakeholders via our web site. The most recent
Northeastern University / Bouve College of Health Sciences, School of Pharma

The strategic planning process was initiated during a faculty retreat in 2012 with additional feedback thought from alumni and students throughout development phases. Final strategic plan was dissemination to all stakeholders via our web site. Prior to the strategic planning retreat, a SWOT analysis was performed based on committee reports and evaluation of previous strategic plan accomplishments. This work was driven by school's committees that include student and alumni representation. We have recognized the importance of involving our stakeholders throughout the entire strategic planning process and plan to involve them in all stages of planning going forward. (Q3)

Our mission and vision statements are aligned with, and responsive to, the college and university mission and vision statements, particularly our focus on experiential education and use-inspired research. The school’s mission statement also aligns well with the vision of the pharmacy profession and places a focus on practice, experiential education and research. The mission statement addresses lifelong learning and the contribution of the school to individual and population health. The identification of pharmaceutical sciences and pharmacy practice in the statement ensures that the core disciplinary areas identified by the profession, as well as both basic and applied research, are included and valued. Our Assessment Plan includes evaluation criteria and feedback process to monitor our achievement of mission and goals (See Standard 3) (Q1, 2, 7).

The most recent revision of vision focused on better alignment with the BCHS mission to prepare our graduates to work as members of an interprofessional (IP) health care team. Since 2012, the school has participated in 3 BCHS retreats focused on developing IPE curriculum and fostering IP research collaborations. In 2013, BCHS opened a state-of-the-art Simulation center that will allow our students additional opportunities to learn with other health professions students (See Curriculum Standards for more IPE initiatives). AACP graduating survey data and local surveys reveal that our students have the opportunity to learn with other health professions students in many different settings, with the most common being APPE, IPPE, lectures and simulations. The disciplines our students are most often exposed to are nursing, physical therapy, medicine and physician assistant. Compared with peer match mates our students report more agreement with being prepared to work with the health care team to implement patient care plans and to communicate with providers (Q6, 8).

The school's dedication to excellence in pharmacy practice education and research requires values that are consistent with contemporary pharmacy practice and a vision for the future of the profession. The school Vision and Mission statements are used to frame the goals the school identifies in the strategic planning process. The educational activities within the school, including those associated with graduate programs, postgraduate training, continuing professional education, and faculty development are evidence that the school is dedicated to ensuring that students, faculty, alumni, preceptors, and pharmacists have access to the education and training needed for their continued success. (Q2, 5).

Our dedication to research is evident in a number of ways. Our faculty are consistently in the top 20 schools nationally and in the top 2 private schools of pharmacy in total and NIH grant funding (see http://www.aacp.org/resources/research/Pages/PharmacyFacultyResearchGrantData.aspx). Nearly all of our faculty agree that the school encourages them to engage in scholarly activity. We have made considerable efforts in involving our students in our research activities. Rho Chi Student Chapter maintains and updates a research compendium that informs our students of research opportunities. Since we began to publish this compendium, student agreement that they were aware of opportunities to participate in research with faculty increased from 69% in 2009 to 84% (Q5, 9)
The school through its faculty and students contributes to the community in a variety of ways. Our faculty and students work with 110 IPPE and over 200 APPE practice partners to deliver patient care and services. Our student professional organizations, individual students, and faculty participate in community service. Recently, the school had an opportunity to share the breadth of its community engagement at the 2014 AACP Annual Meeting Poster session (see Appendix 1.3.1) (Q5).

The School of Pharmacy is committed to post-graduate education and development. Currently, the school has residency program affiliations with Walgreen’s and Federally Qualified Health Centers (FQHCs) / Program for All-Inclusive Care for the Elderly (PACE) with four residents in community and ambulatory based programs. Additionally, the school has fellowship programs in Critical Care at Tuft’s Medical Center and Pharmaceutical Industry fellowships in medical affairs and clinical research with Cubist Pharmaceuticals and Alnylam Pharmaceuticals. Additionally, numerous clinical faculty are involved in post-graduate residency training programs at Tuft’s Medical Center, Boston Medical Center, Brigham & Women’s Hospital, Lahey Clinic, Dana Farber Cancer Institute, and Beth Israel Deaconess Medical Center. The School has an active Continuing Pharmacy Education Office that delivers online and live ACPE accredited continuous education programs. (Q6, 8).

Our commitment to post-graduate education is further demonstrated by our encouragement and preparation of our graduates for post-graduate programs. Faculty in collaboration with local residents and fellows deliver informational sessions and advise students throughout the application process. With the past 3 graduating classes our placement rates into residencies and fellowships have averaged about 30% of the graduating class, which is well above national rates (Q6). (2013 – 34%, 2014 – 27%, will update with 2015 numbers but this will be removed).

In 2013 the school approved a new PharmD/ Masters in Public Health (MPH) track as the result of the work on our 2009-2012 strategic plan. Needs assessment demonstrated student interest in obtaining this joined degree and we are able to leverage the existing BCHS MPH program resources and curriculum. The track was developed to ensure that the students complete all PharmD requirements outlined by our curriculum plan with students completing up to 5 MPH courses using their elective course slots towards the MPH degree. Upon earning their PharmD degree, majority of the students will be able to earn their MPH degree within the additional year (see http://www.northeastern.edu/bouve/health-sciences/programs/pharmd-mph/ for more information). Students who select to pursue this track can apply in their P1, P2, or P3 year and will fully benefit from the opportunities not only offered in the school of pharmacy but also additional advising from the MPH program (Q5-7).

The available graduate, alumni and faculty AACP survey data demonstrates that our community is generally satisfied with the education they receive at the School of Pharmacy. Our students and alumni more frequently agree or strongly agree that they would choose Northeastern to study pharmacy again if they were given the opportunity, compared with national data. Close to 95% of our alumni rate the overall quality of my education experience as very good. While we have noticed a greater number of students who say that they would not choose pharmacy as a career if they were to start again or would not recommend a career in pharmacy to a friend or a family member, our data is similar to national and peer comparisons and is likely a reflection of the changing market place and available job opportunities particularly since many pharmacy students graduate with high debt. (Q9).
4. College or School's Final Self-Evaluation

| Compliant | Compliant with Monitoring | Partially Compliant | Non-Compliant |

5. Recommended Monitoring

(School comments begin here)
2. Strategic Plan

The college or school must develop, implement, and regularly revise a strategic plan to facilitate the advancement of its mission and goals. The strategic plan must be developed through an inclusive process that solicits input and review from faculty, students, staff, administrators, alumni, and other stakeholders as needed, have the support of the university administration, and be disseminated in summary form to key stakeholders.

2. College or School's Self-Assessment

| The program is in the process of or has developed, implemented, and regularly revises a strategic plan to advance its mission and long-term goals. | Satisfactory |
| The strategic planning process is inclusive, soliciting input and review from faculty, students, staff, administrators, alumni, and other stakeholders as needed, has the support of the university administration, and is disseminated in summary form to key stakeholders. | Satisfactory |
| The strategic plan of the college or school is aligned with the university's strategic plan. | Satisfactory |
| Substantive changes are addressed through the strategic planning process, taking into consideration all resources (including financial, human, and physical) required to implement the change and the impact of the change on the existing program. | Satisfactory |
| Consultation with ACPE occurred at least six months before recruiting students into new pathways or programs. | Satisfactory |
| The college or school monitors, evaluates and documents progress toward achievement of strategic goals, objectives, and the overall efficacy of the strategic plan. | Satisfactory |

3. College or School's Comments on the Standard

**Focused Questions**

☑ How the college or school's strategic plan was developed, including evidence of the involvement of various stakeholder groups, such as faculty, students, preceptors, alumni, etc.

☑ How the strategic plan facilitates the achievement of mission-based (long-term) goals

☑ How the college or school's strategic plan incorporates timelines for action, measures, responsible parties, identification of resources needed, and mechanisms for ongoing monitoring and reporting of progress

☑ How the college or school monitors, evaluates and documents progress in achieving the goals and objectives of the strategic plan

☑ How the support and cooperation of University administration for the college or school plan was sought and achieved, including evidence of support for resourcing the strategic plan?

☑ How the strategic plan is driving decision making in the college or school, including for substantive changes to the program

☑ How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard

Northeastern University / Bouve College of Health Sciences, School of Pharma
2. Strategic Plan

☑ Any other notable achievements, innovations or quality improvements
☑ Interpretation of the data from the applicable AACP standardized survey questions, especially notable differences from national or peer group norms.

(School comments begin here)

The school under the direction of the Dean and the Executive Committee is committed to maintaining a strategic plan encompassing goals for a 3-5 year period. Our most recent strategic plan was approved in December of 2012 to cover a time frame of 2013 through 2017 (See Appendix 2.1.1). The previous plan was developed in 2008 and covered 2009-12 (See Appendix 2.1.2). A SWOT (Strength, Weaknesses, Opportunities, Threats) analysis was conducted by the leadership group with involvement of faculty, staff, student, and alumni stakeholders prior to September 2012 school-wide strategic planning retreat. As part of the SWOT analysis, the team reviewed previous accomplishments, accreditation guidelines, and institutional strategic plans and initiatives. This analysis was shared with John Deadwyler (Bernard Consulting Group) as part of retreat pre-planning. (Q1). Both departments also engage in setting annual strategic goals.

During a daylong retreat (see agenda in Appendix 2.3.1), participants went through the process of affirming the current mission, vision, and core values and identified 6 strategic initiatives (Appendix 2.1.1). These initiatives were established to help achieve school’s mission, vision, represent our core values, and continue previous strategic initiatives. They are broad based and focused on areas for enrichment and enhancement that will help the School continue to move forward, with the ultimate goal of graduating professionals dedicated to pharmacy practice, interprofessional collaboration, life-long learning and making an impact on the communities where they choose to live and work. The plan also focuses on strengthening the school community engagement, maintaining productivity and dynamic work environment. The engagement of the SOP with its’ stakeholders is key to the success of our programs and graduates. (Q2).

Retreat participants divided into 6 groups to continue to work on developing goals, objectives, action steps, timelines, and responsible parties beyond the retreat. The current strategic plan includes 6 initiatives with 21 broad goals and was approved by the faculty in December 2012 and then shared with all stakeholders via our web site for comment. A survey link was provided to the stakeholders; however no further comments were received and no major changes were made to the plan approved by the faculty. The current strategic plan is available to alumni, faculty, students and others through the schools website at http://www.northeastern.edu/bouve/pharmacy/ under the “About” section (Q1, 3).

Implementation of the strategic plan requires engagement of individuals, standing committees, and ad hoc working groups. Assessment and Executive Committees discuss the progress towards achievement of goals on a regular basis. Annually, the Director of Assessment collates information received from the reports received from standing committees, administrators and other responsible parties assigned to strategic goals. This information, in turn, informs next year’s planning and annual committee charges (see Appendix 2.3.2) (Q3, 4). As part of this process of continuous evaluation and quality improvement, the current strategic plan assigns responsibility to members of administrative team to conduct an ongoing internal program review of compliance with accreditation standards (Appendix 2.1.1). Beginning in 2013, we used Internal Program Review feature available in AAMS to document areas of strength and areas for improvement as part of our standards compliance review (Q4, 8). The information gathered and discussed as part of monitoring of the achievements of mission, vision and our strategic plan is frequently communicated with the faculty during SOP meetings, as well as discussed as part of the
work of the standing committees. Therefore, many of the decisions made by school’s faculty and administrators are informed by our strategic plan (Q6).

Several substantive changes have been informed by the previous and current strategic plans. In the 2009-2012 plan, Objective 1.5 “Determine the needs for and value of new programs of study, including joint degree options, minor tracks and areas of specialization” led to the development of a joined PharmD/Masters in Public Health (MPH) track as well as the expansion of residency and fellowship programs. The development of this track was informed by a needs assessment, resource analysis, and collaboration potential with an established MPH program in BCHS. In the current strategic plan, under the strategic goal 1.3 “Develop and implement new graduate and joint degree programs that differentiate our students in the marketplace and respond to workplace needs” we will continue to oversee joined PharmD/MPH implementation and evaluation of enrollments, curriculum, and graduate’s success. ACPE was notified in October of 2013 regarding the new PharmD/MPH track. (Q6,7).

Work has begun on strategic goal 5.1 “Restructure from a 0-6 to a 2 plus 4 professional program (first 2 years as pre-pharmacy students with opportunity to apply for entry into P1 program)”. Our current freshman enrollments have declined over the past 5 years and provided us with an opportunity to open a different pathway for graduate entry admission into P1 year. In 2014 we enrolled our first class of 11 graduate entry students with undergraduate degrees. Additionally, we accepted several internal and external transfer students into the freshman and sophomore classes prior to entry into the PharmD program. These pathways (see Standard 17 for more detail) will continue to help us meet our enrollment goals and receive needed resources to administer PharmD program and to also study the success of the students who are coming in to the program via 2+4 or 4+4 models. (Q6,7).

Effective strategic plans require support of the college and university administration and appropriate resources. Our plan aligns well with Northeastern University’s 2010-15 Long Range Academic Plan (see Appendix 2.2.1), which focuses on the growth of academic programs, global student experiences, recruitment and retention of faculty, growing our interdisciplinary research enterprise, enhancing student experience and improving our infrastructure. Our plan also aligns with BCHS strategic plan 2013-18 (See Appendix 2.2.2), which emphasizes interprofessional education, faculty recruitment and retention, globalization, quality improvement, and health sciences research. Due to these alignments, we have been able to receive the support of administration as well as resource allocation. For example, during the recent economic downturn, we have continued to recruit faculty and staff (See standard 24). Our research infrastructure has improved with the establishment of The Bouvé College Office of Research (BCORE). BCORE was established to enhance the capacity for wide-ranging and impactful health-related research and provides a broad array of research support to members of the Bouvé College research community including assistance with grant development and submission, post-award management of grants, training workshops, and research management tools. BCORE staff also provides assistance with finding collaborators and research opportunities (Q5, 8).

The strategic plan, as mentioned previously, employs a continuous improvement and monitoring process. The self-study process itself has helped the school adjust the strategic plan and continue forward to achieve our goals. As part of the self-study, the self-study steering committee charged faculty, students, staff and alumni groups to review the standards and perform a SWOT analysis immediately after commencement of the self-study in the spring of 2014. This process was robust and allowed faculty, students, alumni, and preceptors to review the standards and reflect on areas of improvement and recommend changes, before even starting the self-study report itself. The outcomes were reported to the Executive Committee, where the findings were discussed and appropriate actions...
and changes were implemented to address the findings. This prospective in-depth SWOT analysis demonstrated the culture of planning and action the school exemplifies to remain current and relevant in pharmacy education and the issues facing the practice of pharmacy. One of the recommendations for improvement pertinent to this standard was to further enhance alumni and other external stakeholders' input in the strategic planning process. A recommendation to form a Dean’s Advisory Council has been forwarded to the Dean with plans for board formation in fall of 2015 (Q1, 4).

Faculty agreement that the school is effectively using strategic plan has steadily increased from 71% in 2009 to 91% in 2014. This improvement in faculty perceptions can be attributed to the described process improvements in both forming the plan and continuously evaluating and tracking progress towards achieving our strategic goals. In 2014, 96% of faculty agreed or strongly agreed that the school sought their input on the current strategic plan reflecting broad involvement of all faculty in the strategic planning process. It is notable that our AACP Faculty Survey data related to this standard are significantly better than both national and peer comparisons (Q8, 9).

4. College or School’s Final Self-Evaluation

☐ Compliant
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☐ Partially Compliant
☐ Non-Compliant

5. Recommended Monitoring

(School comments begin here)
3. Evaluation of Achievement of Mission and Goals

The college or school must establish and implement an evaluation plan that assesses achievement of the mission and goals. The evaluation must measure the extent to which the desired outcomes of the professional degree program (including assessments of student learning and evaluation of the effectiveness of the curriculum) are being achieved. Likewise, the extent to which the desired outcomes of research and other scholarly activities, service, and pharmacy practice programs are being achieved must be measured. The program must use the analysis of process and outcome measures for continuous development and improvement of the professional degree program.

2. College or School's Self-Assessment

<table>
<thead>
<tr>
<th>Description</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>The evaluation plan describes a continuous and systematic process of evaluation covering all aspects of the college or school and the accreditation standards. The plan is evidence-based and embraces the principles and methodologies of continuous quality improvement.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Individuals have been assigned specific responsibilities in the evaluation plan.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The evaluation plan uses surveys of graduating students, faculty, preceptors, and alumni from the American Association of Colleges of Pharmacy (AACP).</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The evaluation plan includes assessments to compare and establish comparability of alternative program pathways to degree completion, including geographically dispersed campuses and distance-learning activities.</td>
<td>N/A</td>
</tr>
<tr>
<td>The program assesses achievement of the mission and long-term goals.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The analysis of process and outcome measures is used for continuous development and improvement of the professional degree program.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The program measures the extent to which the desired outcomes of the professional degree program (including assessments of student learning and evaluation of the effectiveness of the curriculum) are being achieved.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The program measures the extent to which the desired outcomes of research and other scholarly activities, service, and pharmacy practice programs are being achieved.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The evaluation plan includes the college or school's periodic self-assessment using the accreditation standards and guidelines to assure ongoing compliance.</td>
<td>Satisfactory</td>
</tr>
</tbody>
</table>

3. College or School's Comments on the Standard

Focused Questions
- How all components of the program's mission and goals are being followed and assessed
- How the college or school periodically self-assesses its program using the accreditation standards and guidelines to assure ongoing compliance.
- A description of the instruments used in assessment and evaluation of all components of the program's mission (e.g. in the areas of education, research and other scholarly activity, service, and pharmacy practice).
- How assessments have resulted in improvements in all mission-related areas
Innovations and best practices implemented by the college or school
Description of the members of the Assessment Committee (or equivalent structure/accountable person), charges and major accomplishments in the last academic year
How the college or school makes available to key stakeholders the major findings and actions resulting from its evaluation plan
How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard
Any other notable achievements, innovations or quality improvements

(School comments begin here)
The Assessment Committee works closely with the Dean, the Director of Assessment, and the Executive Committee to develop and regularly update an Evaluation Plan that encompasses all of the elements of our mission and goals (Appendix 3.1.1). Most recent revisions to the assessment plan were made and approved by the Assessment Committee in the spring of 2014 and all faculty in the fall of 2014. Major updates included reorganization of the plan into two main areas: Programmatic and Curriculum assessment and evaluation measures. Benchmarks, used to monitor progress since our previous accreditation visit, were also formally added into the plan. The current assessment plan (see Appendix 3.1.1) includes all of the following:

- information regarding desired outcome with specific evaluation instrument or data source;
- responsible party for data collection;
- how data are evaluated, shared, and how the results will be used for quality improvement;
- resources required;
- relevant stakeholders;
- and benchmarks for national and peer comparisons or our own trends over time (Q1).

The assessment plan specifies measures and outcomes for which data are routinely gathered and monitored to evaluate our curriculum (both didactic and experiential), student enrollments and progression, faculty quantitative and qualitative factors, research productivity, community engagement and leadership, and student support services. All relevant stakeholders, including students, faculty, alumni, preceptors, and surrounding community are represented. The assessment plan uses both internal and external data sources and metrics to monitor the progress of achieving goals as well as summative and formative measures. (Q1)

Examples of instruments used to evaluate our mission and goals include periodic SWOT analyses to inform our strategic planning and annual committee reports to track progress in achievement of strategic goals and objectives. AACP curricular quality surveys are regularly administered to students (annually), faculty (every 1-2 years) and alumni and preceptors (every 2-3 years) to monitor all aspects of our program and curricular quality and provide benchmark data for national and peer comparisons. Additionally, the Assessment Committee monitors student exit surveys and NAPLEX examination results and makes recommendations for improvement. (Q3)
Courses, faculty and preceptors are evaluated in formative and summative ways. Faculty are advised to triangulate course feedback from self-assessments, self-evaluations, and peer feedback. In the Department of Pharmacy and Health Systems Sciences, formative peer evaluation of teaching is mandatory (See Appendix 3.3.1) for all faculty annually or biannually. In the Department of Pharmaceutical Sciences, peer evaluation is performed for tenure track faculty by senior faculty. We have developed a nationally recognized model and tool for peer observation of teaching and evaluation (Appendix 3.3.2) and provide ongoing training and development for peer observers. Student feedback for courses is solicited via formative mid-semester feedback (Appendix 3.3.3), a process that has been developed by the school and overseen by the Director of Assessment. This process engages student class representatives to collect and organize feedback from their class and discuss it with the coordinator of each course. The university administers electronic summative course TRACE evaluations (see Appendix 3.3.4) for each course. Self-assessment is encouraged in annual performance review with a summative feedback provided by the committee of peers and the Department Chair. Preceptors receive feedback through preceptor and site evaluation reports (See Standard 14) (Q3, 5).

The assessment committee evaluates data from AACP surveys annually. Agreement (combined ‘agree’ and ‘strongly agree’) and disagreement (combined ‘disagree’ and ‘strongly disagree’) are reviewed for each question. The committee uses a threshold of 5% or more difference in agreement or disagreement longitudinally and with national/ peer comparisons to identify our strengths and areas for concern. These areas are discussed by the assessment committee and further communicated with responsible individuals. Assessment and curriculum committees collaborate closely with the chairs and respective directors serving on both committees. The Director of Office of Experiential Education also serves on the Assessment committee. The chair of the assessment committee and/or the Director of Assessment assume responsibility to communicate recommendations from AACP survey analysis to the Department Chairs, the Executive Committee, the Dean, the Office of Student Services, and the Assistant Dean for Academic Affairs. Action plan with response to AACP survey results is documented annually and is shared with the faculty on school portal (Q3, 8).

Our NAPLEX data over the past 5 years indicate the overall strength of our curriculum with pass rates and individual domain scores close to the national averages. Our MPJE scores have been slightly below the national averages. The Curriculum and Assessment committees have recently discussed strategies to ensure that our students are successful in passing NAPLEX and MPJE (See Standard 9) (Q3, Q5).

Evaluation of curricular outcomes is comprehensively described in Standard 15. One notable quality improvement initiative to assist with evaluation of curricular outcomes on an aggregate and individual student level is implementation of electronic testing and assessment solution, ExamSoft (See Standard 15). As the implementation of this software continues throughout the curriculum, curriculum and assessment committees will have access to powerful analytics to further help us determine the competency achievement of our students and refine our curriculum. On the experiential side, standardized rotation performance assessments and student self-assessments provide data for achievement of competencies during IPPEs and APPEs (See Standard 14) (Q3, 8).

It is noteworthy that over the last 10 years, assessment activities have been leading to a culture of assessment among our faculty, staff, and students. Many quality improvement initiatives have been undertaken since the last accreditation visit and described throughout this self-study report. These initiatives have been informed by data and discussion among the faculty, students, alumni and preceptors. Some examples include (Q4):
• Revision of our entire curriculum to improve course sequence, flexibility, and opportunities for professional electives (See Curriculum Standards)
• Mapping of the revised curriculum to ABOs and gap analysis in 2014 with recommendations to the curriculum committee to continue to develop activities to address interprofessional and informatics competencies. Interprofessional Curbside Consult activity has already been developed and added to the CDM Skills Lab 4 course in 2015.
• AACP survey feedback that resulted in several curricular changes: Drug Literature Evaluation course has been modified to include several lecture slots dedicated to informatics and a population health project has been added to CDM 3 seminar course
• Development of new professional elective courses
• Revisions of APPE performance assessment instruments (See Standard 14)
• Ongoing conversations with the Financial Aid office and improved orientation to financial aid changes in the P4 year that resulted in improved satisfaction of students with financial aid services (See Student Standards)
• Improved academic support with increase in tutoring services (See Student Standards)
• Improved organizational structure with appointments of the Director of Assessment and Director of Undergraduate and Professional Programs and additional staff support (See Standards 7 and 24)

Assessment expertise exists in the school among many faculty with the leadership provided by Dr. Margarita DiVall, who has been appointed as the Director of Assessment in 2010 based on the needs for improvement identified during our 2008-2009 self-study. Dr. DiVall has committed a significant effort to her continued professional development in the area of assessment and leadership. She has completed ALFP program in 2010-2011. She participated in a prestigious and rigorous Harvard Macy’s Course: “A Systems Approach to Assessment in Health Professions Education” in 2011 and many other professional development opportunities at national meetings. She has also completed a Masters in Education in 2014. Dr. DiVall has been recognized nationally for her expertise in assessment and has been invited to present on a variety of assessment related topics at other colleges of pharmacy, national meetings, and AACP Institute. While Dr. DiVall led the Assessment Committee as the Chair until 2014, under her guidance and discussion with the leadership of the school and the assessment committee, it was decided that it is best for the committee to be led by a faculty and to amend the bylaws to ensure faculty governance of this important committee. The Assessment committee consists 4 faculty members (2 from each department), a student representative (and alternate), a representative from the Office of Student Services, Director of the Office of Experiential Education, and a Co-op representative. All of these members are voting members of the committee. Additionally, the Director of Assessment and the Director of Undergraduate Education and/or Curriculum Committee Chair are ex-officio members of the committee (non-voting). In addition to the Director of Assessment and the Assessment Committee, the Executive Committee also oversees the implementation of the evaluation plan and ongoing quality improvement efforts. 2014-2015 Committee members are included as Appendix 3.2.1. End of 2014-15 Committee Report is included as Appendix 3.2.2 and reflects the charges and accomplishments of the group (Q6, 9)

As part of the systematic approach to quality improvement we also have an established process to monitor our ongoing compliance with the accreditation standards. Our bylaws and strategic plan identify responsible administrators and committee for standard compliance review. The process for standard compliance review is capture in the School’s Assessment Plan. The review is periodic with the goal of midpoint compliance review between accreditation visits and any time updates or new guidelines are released. Since our 2009 accreditation visit we have worked diligently to resolve any areas of partial compliance and to provide updates on areas of monitoring. All of the issues were addressed by 2012
with no further monitoring required from ACPE. In 2011, the Executive Committee discussed changes in version 2.0 of 2007 standards. In 2013, the leadership of the school used Internal Program Review Feature of AAMS to document our compliance with the standards, identify areas of strength and areas for improvement and to develop an action plan to ensure 100% standard compliance. In 2015, the leadership group and the faculty reviewed and provided feedback on Standards 2016 draft. With new guidelines release in 2016, the standards have been reviewed and our self-study revealed that we are well on our way to be in full compliance with this version of standards (Q2, 9)

Assessment activities at the school of pharmacy are faculty and student driven and transparent. We educate students on the value of feedback at the course and programmatic level. We share with them quality improvements that are made as the result of their feedback at townhall meetings and newsletters. With implementation of ExamSoft in several courses in P2 and P3 years, we have begun to train students to use individual performance reports that are now available to them to identify their learning gaps and encourage them to self-direct their learning to close these. Students are also asked to consistently reflect on their education and professional development through a Professional Pharmacy Portfolio. University makes available course evaluation data for all students. Faculty receive regular reports from the Assessment committee with updates on survey results, analysis, and recommendations, board scores, and other data. Reports are made available via blackboard school portal. All internal and external stakeholders have access to our strategic plan and program quality indicators via our web site (http://www.northeastern.edu/bouve/pharmacy/accreditation/) (Q7).

4. College or School's Final Self-Evaluation

| ☑ Compliant | ☐ Compliant with Monitoring | ☐ Partially Compliant | ☐ Non-Compliant |

5. Recommended Monitoring

(School comments begin here)
4. Institutional Accreditation

The institution housing the college or school, or the independent college or school, must have or, in the case of new programs, achieve full accreditation by a regional/institutional accreditation agency recognized by the U.S. Department of Education.

2. College or School's Self-Assessment

| The institution housing the program, or the independent college or school, has full accreditation by a regional/institutional accreditation agency recognized by the U.S. Department of Education or it is in the process of seeking accreditation within the prescribed timeframe. | Satisfactory |
| The college or school reports to ACPE, as soon as possible, any issue identified in regional/institutional accreditation actions that may have a negative impact on the quality of the professional degree program and compliance with ACPE standards. | N/A |

3. College or School's Comments on the Standard

Focused Questions

☑ Any deficiencies from institutional accreditation that impact or potentially impact the college, schools or program (if applicable)
☑ Measures taken or proposed by the college or school to address any issues arising from institutional accreditation (if applicable)
☑ How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard

(School comments begin here)

The School of Pharmacy is part of the BCHS at Northeastern University, an educational institution accredited by the New England Association of Schools and Colleges, Inc. (NEASC). The university’s most recent comprehensive evaluation and site visit by NEASC occurred November 2-5, 2008. Accreditation was reaffirmed by the NEASC Commission on Institutions of Higher Education following the normal review process on April 16, 2009 (Appendix 4.1.1). The university’s accreditation will be reviewed next in 2019 (Q1, 2).

The school was actively involved in this university-wide self-study and programmatic evaluation. Dean Reynolds served as the co-chair of the academic section of the self-study (Q3). It is noteworthy that the central administration selected Dean Reynolds to fill such an important leadership role in the NEASC self-study process (Q3).

Northeastern University provided NEASC with a midpoint report that included an assessment of it’s programmatic outcomes. The School of Pharmacy provided data for this report and was recognized, both within the BCHS and the University, as being a leader in establishing these programmatic outcomes and having an assessment plan in place to measure that they are being met.
4. College or School's Final Self-Evaluation

<table>
<thead>
<tr>
<th>Compliant</th>
<th>Compliant with Monitoring</th>
<th>Partially Compliant</th>
<th>Non-Compliant</th>
</tr>
</thead>
</table>

5. Recommended Monitoring

(School comments begin here)
Northeastern University / Bouve College of Health Sciences, School of Pharma

5. College or School and University Relationship

<table>
<thead>
<tr>
<th>The college or school must be an autonomous unit within the university structure and must be led by a dean. To maintain and advance the professional degree program, the university president (or other university officials charged with final responsibility for the college or school) and the dean must collaborate to secure adequate financial, physical (teaching and research), faculty, staff, student, practice site, preceptor, library, technology, and administrative resources to meet all of the ACPE accreditation standards.</th>
</tr>
</thead>
</table>

2. College or School's Self-Assessment

| The university president (or other university officials charged with final responsibility for the college or school) and the dean collaborate to secure adequate financial, physical (teaching and research), faculty, staff, student, practice site, preceptor, library, technology, and administrative resources to meet all of the ACPE accreditation standards. | Satisfactory |
|---|
| The college or school participates in the governance of the university, in accordance with its policies and procedures. | Satisfactory |
| The college or school has autonomy, within university policies and procedures and state and federal regulations, in all the following areas:  
  - programmatic evaluation  
  - definition and delivery of the curriculum  
  - development of bylaws, policies, and procedures  
  - student enrollment, admission and progression policies  
  - faculty and staff recruitment, development, evaluation, remuneration, and retention | Satisfactory |
| The college or school's reporting relationship(s) is depicted in the university's organizational chart. | Satisfactory |

3. College or School's Comments on the Standard

<table>
<thead>
<tr>
<th>Focused Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>☑ How the college or school participates in the governance of the university (if applicable)</td>
</tr>
<tr>
<td>☑ How the autonomy of the college or school is assured and maintained</td>
</tr>
<tr>
<td>☑ How the college or school collaborates with university officials to secure adequate resources to effectively deliver the program and comply with all accreditation standards</td>
</tr>
<tr>
<td>☑ How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard</td>
</tr>
<tr>
<td>☑ Any other notable achievements, innovations or quality improvements</td>
</tr>
</tbody>
</table>

(School comments begin here)

The School of Pharmacy is governed by the bylaws of the School of Pharmacy, the Bouvé College of Health Sciences, and the University Faculty Senate. Within the central administration of the university, the School of Pharmacy is represented by the Dean of the Bouvé College of Health Sciences, School of Pharma.
The college dean is actively involved in administrative planning within the university, representing the schools and the many health science programs within the college (Q1).

The university, college, and school organizational charts are included in Appendices. The university organizational chart (Appendix 5.1.1) identifies the Dean of Bouvé College of Health Sciences (Terry Fulmer until May 2015, Interim BCHS Dean is ______) as the administrator who reports directly to the provost on matters relating to Bouvé College and its many academic programs, including pharmacy. Dean Reynolds is the administrative chief of the School of Pharmacy, and he reports on issues and needs of the School of Pharmacy to Dean Fulmer (Appendix 5.1.2). This model is consistent with the Bouvé College Bylaws (Appendix 5.2.1) section 3.1, which notes “The Dean of the College is the chief academic and executive officer of the College and is the chief internal and external spokesperson for the College.” (Q1)

The School of Pharmacy functions autonomously within the Bouvé College of Health Sciences and within the university, as described in the bylaws of the school, college and university. The dean of the School of Pharmacy is the chief internal and external spokesperson for, and representative of, the school in the academic and professional communities (Bouvé Bylaws article 3.1, revised September 2014). On a weekly basis, the school dean and school department chairs meet with the college dean, the college leadership and chairs and deans from other college units and thus the relationship between the school’s administration and the college’s administration is very strong. (Q2)

School faculty members are responsible for developing and delivering the professional curriculum, recommending freshman admission criteria, and establishing and administering progression standards, including those necessary for students to be admitted into the first professional year (P1) of the Doctor of Pharmacy Program. Additionally, the recruitment of faculty and staff is facilitated through a process of departmental identification of needs, with comment and feedback from the school and college deans, followed by budgetary approval of hires through the Office of the Provost. The school dean is proactive and responsive in this process and works closely with the department chairs and college dean to identify the priority of hiring and to advocate for approval from the university administration. Additionally, the school dean and department chairs work in concert to administer faculty development, workload, and merit programs in accordance with school policies and procedures. (Q3)

The Bouvé College of Health Sciences bylaws section 2.3 outlines the autonomy of the school dean, the department chairs and School of Pharmacy faculty with regard to education policy; admission and student progression; faculty and staff appointments, promotion, and development; budget; and approval of educational programs in the school. The School of Pharmacy is autonomous to the full extent that college and university policies allow and enjoys a level of autonomy that is similar to the other professional programs within in the college. The curriculum modification process that is place is good example of such autonomy. Proposals for curriculum change originate with a faculty member and his/her department and are advanced through the school’s Curriculum Committee, followed by review by the school dean, and with final approvals by the collective school faculty. Subsequently, the college’s Undergraduate Curriculum Committee (Bouvé bylaw 4.5.2), that includes three members of the School of Pharmacy, reviews the proposals, may make recommendations back to the School’s Curriculum Committee. The curricular changes then come back to the college faculty for final approval. This process illustrates the faculty- driven nature of both the curriculum development the governance process in the School, and highlights the autonomy that the School of Pharmacy enjoys within both the College and the University. (Q2)
Faculty involvement in the governance of the university is outlined in the Faculty Senate Bylaws (Appendix 5.2.2). School of Pharmacy faculty are represented on the faculty senate by elected members of the tenured and tenure track faculty of the college. Current university policy precludes clinical (i.e., non-tenure track) faculty from serving on the faculty senate. However, the representation of clinical faculty on the faculty senate is an issue that is currently being actively investigated by the faculty senate and thus it anticipated that the current policies surrounding faculty senate representation could change in the near future. The role of the faculty senate is to provide a mechanism for faculty to actively participate in university governance, develop policies, maintain and improve academic standards, and address faculty matters with the administration. The school currently has one representative serving on the faculty senate. (Q1)

School of Pharmacy faculty are actively involved in service to the college and university. College bylaws ensure that pharmacy faculty serve on all college committees. In addition pharmacy faculty serve on many standing university-wide committees such as tenure appeals, graduate administrator reviews. Faculty also participate in cross-college efforts in areas such as nanotechnology, biotechnology, and interdisciplinary doctoral programs. (FQ1)

Overall, the organization of the School of Pharmacy as one of the three schools of the Bouvé College of Health Sciences provides distinct strengths and benefits to pharmacy students, faculty, and administrators. While the structure of the School of Pharmacy within the university organization is not the typical national model, many advantages exist with the current arrangement that is in place. For students, the coordinated efforts of the BOSS and their student counseling and tutoring outreach efforts is of great value. For faculty, the shared college-level financial resources and expertise support within the college help foster robust inter-professional curricular and programmatic initiatives (e.g. Goldstein Simulation Center, graduate programs), interdisciplinary research that is supported by a six-member college research office providing expert pre- and post-award support and a biostatistical consultation service, and numerous community outreach activities such as the Bouvé health van. For administrators, the central Bouvé; college offices provides excellent support in the areas of budget, development, personnel, and graduate studies and serve as strong administrative liaisons to university-wide offices such as the registrar, admissions, and information services. Bouvé; budget reallocations have resulted in additional faculty hires at multiple levels with significant start-up resources including laboratory renovations and equipment purchases. These include 4 new pharmaceutical sciences lines for research-intensive faculty hired in 2004-2005; several resulted in improvements in inter-college research collaboration (see Standard 25 for additional comments). Additional practice faculty and several staff members have also been hired (See standard 24). (Q3,4)

4. College or School's Final Self-Evaluation

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<tr>
<th>Compliant</th>
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<th>Partially Compliant</th>
<th>Non-Compliant</th>
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5. Recommended Monitoring

(School comments begin here)

Several leadership transitions may have a direct impact on the school of pharmacy and will be carefully monitored by School’s leadership. The University is searching for a new Provost and Dean Fulmer announced her resignation as of May 2015. It is likely that the search for the new BCHS Dean will not be open until the Provost position is filled.

Northeastern University / Bouvé College of Health Sciences, School of Pharma
Northeastern University / Bouve College of Health Sciences, School of Pharma

6. College or School and Other Administrative Relationships

The college or school, with the full support of the university, must develop suitable academic, research, and other scholarly activity; practice and service relationships; collaborations; and partnerships, within and outside the university, to support and advance its mission and goals.

2. College or School's Self-Assessment

| The college or school, with the full support of the university, develops suitable academic, research, and other scholarly activity; practice and service relationships; collaborations; and partnerships, within and outside the university, to support and advance its mission and goals. | Satisfactory |
| Formal signed agreements that codify the nature and intent of the relationship, the legal liability of the parties, and applicable financial arrangements are in place for collaborations and partnerships. | Satisfactory |
| The relationships, collaborations, and partnerships advance the desired outcomes of the professional degree program, research and other scholarly activities, service and pharmacy practice programs. | Satisfactory |

3. College or School's Comments on the Standard

Focused Questions

☑ The number and nature of affiliations external to the college or school
☑ Details of academic research activity, partnerships and collaborations outside the college or school
☑ Details of alliances that promote and facilitate interprofessional or collaborative education
☑ How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard
☑ Any other notable achievements, innovations or quality improvements

(School comments begin here)

Consistent with the mission and the related investment in the practice of pharmacy and our commitment to the health of our community, the school maintains a wide range of clinical, research, and academic partnerships.

Experiential Education

Our faculty and students work with 110 IPPE and over 200 APPE practice partners to deliver patient care and services. IPPE and APPE experiences are organized and overseen by experienced cooperative education coordinators and members of the OEE. The OEE office operates in accordance with the school’s approved criteria for experiential sites and educational outcomes (Standard 28). The current structure of the OEE office ensures that student placements occur across a wide range of different settings and that involve contact with variety of healthcare providers, researchers and regulatory officials (see Standard 14)
Given that the IPPE program involves an employer/employee (i.e., the student) relationship, formal affiliation agreements are not developed for IPPE sites. The OEE communicates with each IPPE preceptor after the completion of each IPPE to ensure that the preceptor has documented whether the student has met the specific competencies of the IPPE. (Standard 14). (Q1)

The OEE develops and maintains an affiliation agreement for all APPE practice sites that outline the responsibilities of both the APPE practice site (e.g., instruction, personnel and emergency medical services) and the university (e.g., professional services of the faculty, student and faculty liability insurance) (Standard 28). After being developed by the OEE, each agreement is reviewed and approved by the university’s legal department, the school/college deans, and the appropriate administrator at the site. While most agreements have automatic renewal clauses, the OEE reviews each at least annually to ensure that each is current. Financial arrangements with a practice site are stated directly in the agreement or, in the case of co-funded faculty arrangements, as an addendum to the primary affiliation agreement (Appendix 6.2.1). (Q1)

**Community Engagement and Service Learning**

Service learning is a priority of Northeastern University with these activities coordinated and supported through the university’s Center of Community Service. Staff from the center had informed faculty in school meetings on the services they provide. Given that a pharmacy student who is seeking to engage in service learning experience is doing so on a volunteer basis, formal affiliation agreement are not negotiated between the university and the site of the service learning, although the time frame and supervision requirements for these activities are defined. While our curriculum does not require mandatory service learning, many of our students and faculty engage in their community. (Q1)

The school participates in initiatives at various centers aimed at improving the health of the community including the Center for Community Health Education, Research, and Service, and the Institute for Urban Health Research. The school is part of the university’s Stony Brook Initiative (http://www.northeastern.edu/stonybrook/), a program established in 2008 that engages the university and its neighbors in activities that are designed to be mutually beneficial. Our health science mission fits well with the initiative, and several programs have already been established to promote health and improve access to quality health care. In addition, the Health Careers Academy, a high school housed on the Northeastern University campus, seeks to support and attract inner-city high school students with interests in the health professions. Through this partnership, the university hosts students in campus classrooms, libraries, and laboratories and provides them with support during their high school studies (Q1).

**Interprofessional Education**

The BCHS strives to be the national model for interprofessional health education. The school of pharmacy actively participates in all aspects of the College’s various interprofessional collaborative education and research programs and initiatives to preparing each pharmacy student graduate to function as key member of the inter-professional health team. The new Bouve Arnold Goldstein Simulation Center, named in honor of a former school pharmacy faculty member, provides an interactive learning environment that formally allows student pharmacists to develop the skills and knowledge to function as a part of the health care team in various clinical settings. Students are also prepared by partnerships within the university to work with health sciences students from other professions to promote professional socialization and to introduce interprofessional education competencies (See curriculum standards). Bouve’s Innovations in Oral Health initiative funded by DentaQuest (http://
www.northeastern.edu/oralhealth/) is a national leader in developing all health sciences faculty and students on connections between oral and systemic health. Throughout their IPPE and APPE, all of our students actively participate in interprofessional team-based practice. Some of these offer students an opportunity to participate in interprofessional demonstration projects. Recently, student pharmacists at Northeastern University have participated in the 2014 National Interprofessional Initiative on Oral Health Summit, Harvard Medical School’s interprofessional Crimson Care Collaborative at Beth Israel Deaconess Medical School, and the interprofessional teaching initiative at the West Roxbury VA Medical Center (that is led by a faculty member from the school). (Q3,5)

**Post-graduate Training**

The School of Pharmacy’s collaborations and partnerships directly and indirectly support the development of post-graduate training. Since our last self-study we have significantly expanded the number of residents from 1 to 4 and the number of fellows from 1 to more than 10. The school currently offers 3 ASHP-accredited PGY-1 residency programs at Harbor Health Services, Inc., Elder Service Plan and Dimock Community Health Center and in collaboration with Walgreen’s Pharmacy, supports a community pharmacy residency that is located in the Joselin Diabetes Center. The school also runs a formal residency teaching certificate program that is open to all residents and fellows in the state. (Q4,5).

A critical care fellowship program that exists in relationship between the school and Tufts Medical Center is currently training its fourth fellow. The school has partnered with Cubist Pharmaceuticals to develop a fellowship program that this academic year is training seven fellows in Medical Affairs, Medical Information and Clinical Research. A more recent partnership with Alnylam Pharmaceuticals will start training its first fellow in the summer of 2015. A joint PharmD/Master of Public Health degree program is also offered through the Bouve to promote interdisciplinary education and post-graduate training. Expansion of post-graduate pharmacy education remains a key priority area in the Department of Pharmacy and Health System Science’s recently revised strategic plan (Q4,5).

Substantial efforts are made by faculty and staff in the school to expose students over the course of the Doctor of Pharmacy program to the many post-graduate residency, fellowship and degree programs that are available to them. In addition to the formalized professional mentoring that is provided by faculty to each student where post-graduate opportunities are discussed, special sessions are scheduled throughout the academic year, often through pharmacy student organizations, to raise the profile of these training opportunities. Residents and fellows actively serve as facilitators (with mentorship by faculty) in the pharmacotherapy seminars that all P-3 students participate in. This also serves as an ideal forum for student pharmacists to learn more about postgraduate training opportunities. (Q4)

**Research Partnerships**

With its location in the heart of Boston, one of the largest hubs of biotechnology and health care in the world, the school of pharmacy has developed countless research partnerships with both academia and industry. Locally, faculty from the school currently have formalized research agreements with Harvard Medical School, Massachusetts General Hospital, Massachusetts Institute of Technology, McLean Hospital, Dana-Farber Cancer Institute, Beth Israel Deaconess Medical Center, Tufts Medical Center, University of Massachusetts Medical School, the Boston VA Medical Center, the University of Michigan, Cubist Pharmaceuticals, and Alnylam Pharmaceuticals. On a national and international basis, faculty have formalized research relationships with Washington University in St Louis, the University of
Toronto, the University Medical Center in Utrecht, Netherlands and the University of Puerto Rico. A more comprehensive list of faculty and research collaborations is provided as Appendix 6.2.2 (Q2)

The School of Pharmacy hosts multiple seminars. For example, the Department of Pharmaceutical Sciences holds a weekly colloquium that brings many renowned researchers speakers to campus. Also, as a part of our biotechnology and nanomedicine initiatives, the school participates in and/or sponsors seminars and research expositions throughout the year (e.g., Pharmaceutical Sciences Research Expo, Center for Drug Discovery Annual Symposium). School faculty also participate in various interdisciplinary programs at the graduate level, including programs in biotechnology, nanomedicine, chemistry, immunology, health informatics, drug discovery, and imaging. The school’s annual Critical Care Symposium (now in its 13th year), brings critical care pharmacists and researchers together to present their research and discuss practice advancements. (Q2)

4. College or School's Final Self-Evaluation

☐ Compliant  ☐ Compliant with Monitoring  ☐ Partially Compliant  ☐ Non-Compliant

5. Recommended Monitoring

(School comments begin here)
7. College or School Organization and Governance

The college or school must be organized and staffed to facilitate the accomplishment of its mission and goals. The college or school administration must have defined lines of authority and responsibility, foster organizational unit development and collegiality, and allocate resources appropriately. The college or school must have published, updated governance documents, such as bylaws and policies and procedures, which have been generated by faculty consensus under the leadership of the dean in accordance with university regulations.

2. College or School's Self-Assessment

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>The college or school is organized and staffed to facilitate the accomplishment of its mission and goals.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The college or school administrative leaders working with the dean have credentials and experience that prepare them for their respective roles.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The college or school administration has defined lines of authority and responsibility, fosters organizational unit development and collegiality, and allocates resources appropriately.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The college or school has established mechanisms to foster unity of purpose, effective communication, and collaboration among administrators.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The college or school's administrative leaders - individually or collectively - are developing and evaluating interprofessional education and practice opportunities</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The college or school has published, updated governance documents, such as bylaws and policies and procedures, which have been generated by faculty consensus under the leadership of the dean in accordance with university regulations.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>If the college or school organizes its faculty into subunits, such as departments or divisions, subunit goals and objectives align with the mission and goals of the college or school.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The effectiveness of each organizational unit is evaluated on the basis of its goals and objectives and its contribution to the professional program.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Programs are in place to hone leadership and management skills of college or school administrators, including department/division chairs (if applicable).</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Faculty meetings and committees established to address key components of the mission and goals are part of the system of governance of the college or school.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Where appropriate, faculty committees include staff, students, preceptors, alumni, and pharmacy practitioners.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Minutes of faculty meetings and committee actions are maintained and communicated to appropriate parties.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The college or school has policies and procedures that address potential systems failures, whether such failures are technical, administrative, or curricular.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Contingency planning includes creating secure backups of critical applications and systems data, providing mechanisms for making up lost course work and academic</td>
<td>Satisfactory</td>
</tr>
</tbody>
</table>
credit, securing alternate means for communication and information delivery, and creating exit strategies to protect students if part or all of a program loses viability.

| The college or school maintains an effective system of communication with internal and external stakeholders. |
| Satisfactory |

| Alternate program pathways are integrated into the college or school's regular administrative structures, policies, and procedures (including planning, oversight, and evaluation), and are supervised by an administrator who is part of the college or school. |
| Satisfactory |

| The college or school ensures that workflow and communication among administration, faculty, staff, preceptors, and students engaged in distance-learning activities are maintained. |
| N/A |

| The college or school retains ultimate responsibility for the academic quality and integrity of distance-learning activities and the achievement of expected and unexpected outcomes, regardless of any contractual arrangements, partnerships, or consortia for educational or technical services. |
| N/A |

3. College or School's Comments on the Standard

<table>
<thead>
<tr>
<th>Focused Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ A description of the college or school's organization and administration and the process for ongoing evaluation of the effectiveness of each operational unit</td>
</tr>
<tr>
<td>✓ A self-assessment of how well the organizational structure and systems of communication and collaboration are serving the program and supporting the achievement of the mission and goals</td>
</tr>
<tr>
<td>✓ How college or school bylaws, policies and procedures are developed and modified</td>
</tr>
<tr>
<td>✓ How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard</td>
</tr>
<tr>
<td>✓ How the college or school's administrative leaders are developing and evaluating interprofessional education and practice opportunities</td>
</tr>
<tr>
<td>✓ How the credentials and experience of college or school administrative leaders working with the dean have prepared them for their respective roles.</td>
</tr>
<tr>
<td>✓ Any other notable achievements, innovations or quality improvements</td>
</tr>
<tr>
<td>✓ Interpretation of the data from the applicable AACP standardized survey questions, especially notable differences from national or peer group norms</td>
</tr>
</tbody>
</table>

(School comments begin here)

DRAFT 2

The School of Pharmacy has an organizational structure (see Appendix 7.1.1) that designates the dean as the chief academic and administrative officer for the school. The dean's leadership team includes the Administrative Operations Manager, the Assistant Dean for Academic Affairs, 2 department chairs and 5 directors (see Job Descriptions as Appendices 7.2.1-7.2.7). Eight staff members support the two departments (three in pharmacy practice, two in pharmaceutical sciences, two in the OEE, one in Graduate Programs). The administrative operations manager both supervises the five staff and supports the Office of the Dean in the School of Pharmacy. In addition, several staff members are hired through Northeastern University / Bouve College of Health Sciences, School of Pharma
grant funding to support research programs and centers associated with the school. Faculty satisfaction with staff support has improved from 36% in 2009 to 61% in 2014; however the comparison to the national data reveals that there is still room for improvement. (Q1, 8)

College or school administrative leaders working with the dean have the credentials and experience that prepare them for their respective roles. Dr. Zgarrick continues as the chair of the Department of Pharmacy and Health Systems Sciences and is a professor of pharmacy. He brings seasoned and valued leadership to the school, having served before this appointment as chair of Pharmacy Practice at Drake University and a vice-chair of Pharmacy Practice at Midwestern University. Dr. Amiji is professor of pharmaceutical sciences and serves as chair of the Department of Pharmaceutical Sciences. The university is currently completing a search for a replacement for Dr. Amiji. Dr. Amiji is recognized internationally for his work in nanotechnology and is an active researcher in the university’s Center for Pharmaceutical Biotechnology and Nanotechnology (Q6).

Since the last self-study, the most notable administrative changes within the school have been the appointment of Dr. DiVall as the Director of Assessment, Dr. Gonyeau as the Director of Undergraduate and Professional Education, Dr. Van Amburgh as the Assistant Dean for Academic Affairs, and Dr. Kirwin as the second vice-chair in the DPHSS. Each has completed leadership development through their completion of the AACP ALFP program. Dr. DiVall and Dr. Gonyeau have also recently received a Masters in Education (Q6,7).

The administrative team functions well, with unit goals being developed and applied in co-operation with faculty and department chairs, under the direction of the school dean. Administrative staff members carry out functions that enable the administrative team to focus on planning, organizing, and achieving unit goals and strategic plans. To ensure the success of students in alternate pathway tracks, Dr. Conley has been assigned as an advisor to graduate entry PharmD students and Dr. Shan Mohammed (BCHS) and Dr. Barr have been identified as co-advisors for students in the PharmD/MPH track. Results from AACP faculty surveys’ demonstrate that the most faculty agree that school administrators have clearly-defined responsibilities (an increase from 74% in 2009 to 93% in 2014) and function as a unified team (agreement 76% in 2009 to 87% in 2014). (Q1, 7, 8)

In early August 2014, a request by Office of the Provost for Dean Reynolds to serve as Interim Vice Provost for Undergraduate Education from September 2, 2014 to approximately August 31, 2015. This led Dean Fulmer (Bouve College of Health Sciences) to appoint Dr. David Zgarrick as the Acting Dean of the School of Pharmacy and Dr. John Devlin as Acting Chair of the DP&HSS for the period that Dean Reynolds fulfills this role in the Provost’s Office. These changes were reported to ACPE. Though Dean Reynolds’s direct involvement in the day-to-day matters of the school have decreased since September 2, 2014 he remains fully committed to the success of the school and its students during this temporary period of transition (Q4).

The Dean’s administrative team comprises the Executive Leadership Committee, which meets regularly. The School and each of its two departments have monthly faculty meetings to facilitate communication and decision making between faculty and administration. Policy recommendations regarding the school are brought forward to the faculty at monthly school meetings for discussion, review, alteration and approval. Written minutes of the proceedings of all school and department meetings and most committee meetings are distributed to faculty. With the exception of the School of Pharmacy Dean’s Leadership Committee (that is appointed by the school dean) all committee appointments are assigned following a faculty solicitation regarding their specific committee interests. Both annual committee reports and
departmental productivity metrics (e.g., research funding, publications) are used by the leadership team to evaluate the achievement of mission, goals, and the strategic plan (See Standard 3). More than 80% of faculty (similar the national average) agreed or strongly agreed in the 2014 survey that the school administration (that also includes faculty whose teaching and scholarship load has been revised to accommodate additional administrative responsibilities) is aware and responsive to their needs/problems. (Q2, 4, 8)

Pharmacy Student Government Organization (PSGO) works closely with administration and faculty to ensure that communication between students and between faculty and students is robust. The PSGO represents 11 professional student organizations within the school and class representatives for each student cohort. To facilitate communication, the PSGO has a common calendar and sends out weekly notification of news, events, and other important matters. Additionally, the school publishes 2 annual newsletters to communicate with current students, alumni and friends (available on the web site). The 2014 AACP student survey revealed that nearly all (> 95%) students agree (data better than the national cohort) that the school provides timely communication regarding important events (Q2, 8).

The faculty, professional staff, and support personnel are all involved in governance and planning and actively articulate the school mission. The faculty have developed the School of Pharmacy bylaws. Changes to bylaws are facilitated through the bylaws committee and approved by faculty vote. School bylaws explicitly detail standing committees, their composition (including faculty, students, and alumni) and the charges of the committee that address key components of school’s mission and goals (Appendix 7.6.1). The school dean assigns supplemental charges to the standing committees each year based on the strategic plan and other initiatives (example, Appendix 7.3.1 and 7.3.2), and committees can further broaden their scopes as needs and interests arise, but they must do so in consultation with the dean (Q3).

BCHS has a long-standing commitment to interprofessional (IP) education. SOP faculty actively participate in the standing Bouve IP committee that is charged to propose policies and procedures to ensure faculty/unit equity for IP efforts and activities and to review and evaluate proposals for IP courses and programs. Notable achievements since the last self-study include a 2012 launch of a new initiative “Interprofessional Research Education and Practice” (iPREP) and the opening of the new IP Simulation Center. Several college-wide retreats engaged faculty and students in the iPREP and identified 4 strategic foci: self-care/self-management, healthy aging (lifespan), urban population health, and drug discovery and delivery. A new student organization “iRISE” was established. For more information see Appendices 7.8.1-3. The School’s strategic plan continues to emphasize the importance of furthering IP collaboration, research and education. Many of our faculty and students have recently published or presented the results of the IP initiatives they participate in. (Q5,8)

The university manages critical information such as student records and other vital information in a safe and secure environment. The Northeastern University Office of Information Security (OIS) manages a disaster recovery plan including emergency procedures in case of any system failure. All information can be found at http://www.northeastern.edu/securenu/. The OIS provides the following services: virus protection, information on safe computing and online presence, information regarding appropriate use and downloading of copyrighted materials, network security services, computer security incident response, information security management and assessment and data sanitization and destruction (Q4).

In addition to the survey data mentioned above, we have identified the following areas of improvement since the last self-study and areas for concern and future action. Faculty survey responses reveal that
35% disagree or strongly disagree (more than the national comparison) that their performance criteria are explicit and clear. While faculty agree or strongly agree that promotion and tenure policies and procedures are consistently applied across the school improved (from 50% in 2009 to 65% on 2014, room for improvement exists given the national cohort average. Preceptor survey result reveal that the degree by which preceptors are updated regarding school policies on harassment and discrimination need to be improved. These data have been discussed by the assessment committee, the self-study committees, the OEE and school leadership. Several recent negative tenure decisions are thought to be contributing to the increased dissatisfaction of faculty with the evaluation process. Remaining data from the AACP surveys reveal stability of satisfaction over time or similarities with national comparison (Q8).

4. College or School's Final Self-Evaluation

☐ Compliant  ☑ Compliant with Monitoring  ☐ Partially Compliant  ☐ Non-Compliant

5. Recommended Monitoring

(School comments begin here)
The school leadership transitions will be carefully monitored and ACPE will be updated if any changes occur. Efforts are underway to improve preceptor understanding of SOP policies on harassment and discrimination. Both departments have recently expanded their mentoring programs to assist faculty in their efforts to receive successful promotion and tenure. AACP survey data will be monitored to evaluate our progress in this area.
8. Qualifications and Responsibilities of the Dean

The dean must be qualified to provide leadership in pharmacy professional education and practice, including research, scholarly activities, and service. The dean must be the chief administrative and academic officer and have direct access to the university president or other university officials delegated with final responsibility for the college or school. The dean must unite and inspire administrators, faculty, staff, preceptors, and students toward achievement of the mission and goals. The dean is responsible for ensuring that all accreditation requirements of the ACPE are met, including the timely submission of all reports and notices of planning for substantive changes.

2. College or School's Self-Assessment

<table>
<thead>
<tr>
<th>Description</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>The dean is qualified to provide leadership in pharmacy professional education and practice, including research, scholarly activities, and service.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The dean is the chief administrative and academic officer and has direct access to the university president or other university officials delegated with final responsibility for the college or school.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The dean unites and inspires administrators, faculty, staff, preceptors, and students to achieve the mission and goals.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The dean is responsible for ensuring that all accreditation requirements of the ACPE are met, including the timely submission of all reports and plans for substantive changes.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The dean has the assistance and full support of the administrative leaders of the college or school's organizational units and adequate staff support. In instances where the dean is assigned other substantial administrative responsibilities within the university, arrangements for additional administrative support to the office of the dean are made to ensure effective administration of the affairs of the college or school.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The dean is responsible for compliance with ACPE's accreditation standards, policies, and procedures. In the event that remedial action is required to bring the college or school into compliance, the dean takes the necessary steps to ensure compliance in a timely and efficient manner.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The qualifications and characteristics of the dean relate well to those called for in the standards, i.e.:</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>• a degree in pharmacy or a strong understanding of contemporary pharmacy and health care systems</td>
<td></td>
</tr>
<tr>
<td>• a scholarly concern for the profession, generally, and for the diverse aspects of pharmacy science and practice, in particular</td>
<td></td>
</tr>
<tr>
<td>• publications in pharmacy and biomedical literature in areas relevant to the mission and goals of the college or school</td>
<td></td>
</tr>
<tr>
<td>• appropriate leadership and managerial skills and experience in the academic (preferred) or health care sectors</td>
<td></td>
</tr>
<tr>
<td>• recognition for career accomplishments by pharmacy or other health profession educators, researchers, and practitioners</td>
<td></td>
</tr>
<tr>
<td>• strong written and interpersonal communication skills</td>
<td></td>
</tr>
</tbody>
</table>
- experience with and a commitment to systematic planning, assessment, and continuous programmatic improvement
- a thorough understanding of and a commitment to teaching and student learning, including pedagogy
- evidence of a commitment to the advancement of research and scholarship
- the ability and willingness to provide assertive advocacy on behalf of the college or school to the university administration
- the ability and willingness to provide assertive advocacy on behalf of the college or school and the profession of pharmacy in community, state, and national health care initiatives
- a record of and willingness to continue active participation in the affairs of pharmacy's professional and scientific societies

The dean has the authority and accepts ultimate responsibility for ensuring:
- development, articulation, and implementation of the mission and goals
- acceptance of the mission and goals by the stakeholders
- development, implementation, evaluation, and enhancement of the educational, research, service, and pharmacy practice programs
- collaborative efforts to develop, implement, evaluate, and enhance interprofessional education, practice, service, and research programs
- development and progress of the strategic plan and the evaluation plan, including assessment of outcomes
- recruitment, development, remuneration, and retention of competent faculty and staff
- initiation, implementation, and management of programs for the recruitment and admission of qualified students
- establishment and implementation of standards for academic performance and progression
- resource acquisition and mission-based allocation
- continuous enhancement of the visibility of the college or school on campus and to external stakeholders
- the effective use of resources to meet the needs and mission of the college or school

The dean has ensured that ACPE has been notified in advance of the implementation of any substantive change, allowing sufficient time for evaluation of compliance with standards or the need for additional monitoring.

### Focused Questions

- How the dean provides leadership for the college or school and program and how the qualifications and characteristics of the dean support the achievement of the mission and goals
- The authority and responsibility of the dean to ensure all expectations of the standard and guidelines are achieved
- How the dean interacts with and is supported by the other administrative leaders in the college or school
8. Qualifications and Responsibilities of the Dean

- How the dean is providing leadership to the academy at large, and advancing the pharmacy education enterprise on local, regional, and national levels.
- How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard
- Any other notable achievements, innovations or quality improvements
- Interpretation of the data from the applicable AACP standardized survey questions, especially notable differences from national or peer group norms

(School comments begin here)

DRAFT 2

The Dean of the School of Pharmacy is the chief academic and administrative officer of the School of Pharmacy. The dean reports directly to the Dean of the Bouvé College of Health Sciences and serves on the senior leadership team of the college. At the school level, the dean is responsible for providing vision and leadership for the faculty, staff, and students with a focus on producing excellence in education, research and service. The dean has specific responsibilities for the planning, development, coordination and management of the school’s academic and research programs, budget, personnel, admissions, unit goals, and strategic priorities. The dean is also charged with enhancing the quality and reputation of the school through interactions with internal and external constituencies. Dean’s Job Description can be found in Appendix 7.2.1 (Q1, 2).

Dean John (Jack) Reynolds holds a BS in Pharmacy and Doctor of Pharmacy degrees and has completed a pharmacy practice residency. Dr. Reynolds spent 6 years in the School of Pharmacy at St. John’s University where he received tenure and was promoted to the clinical associate level in 1988. Following two years in a practice-management position at the University of Massachusetts Medical Center in 1990 he moved to the Massachusetts College of Pharmacy and Health Sciences —Boston where he moved from department chair to division director and then dean of the School of Pharmacy. He was promoted to the rank of professor in 2000. In 2002, he accepted the position of chair of the Department of Pharmacy Practice at Northeastern University. Upon the departure of Dean Daniel Robinson in 2006, Dr. Reynolds served as acting dean for one year and was then selected to serve as the dean of the School of Pharmacy in 2007. Dean Reynolds’ curriculum vita is listed in Appendix 8.1.1 (Q1).

Since becoming Dean, Dr. Reynolds has been invited to deliver a number of presentations at regional and national academic pharmacy meetings and schools of pharmacy. His scholarly efforts have resulted in a number of peer-reviewed publications, a poster presentation and one book chapter. In 2013 Dr. Reynolds was the recipient of the Bowel of Hygeia award from the Massachusetts Pharmacists Association. He was the recipient of both the Distinguished Alumni Award and the Hugh C Muldoon Memorial Lecture award from Duquesne University. Dr. Reynolds service to the profession is extensive. He has served as the national Rho Chi president, participated on numerous American Association of Colleges of Pharmacy committees and task forces and on evaluation teams for the Accreditation Council for Pharmacy Education (Q4).

Outside of the School of Pharmacy, Dr. Reynolds has provided substantial service to Northeastern University including serving at the interim Vice-Provost for undergraduate education during the 2014-15 academic year, Chair of the Committee of Associate Deans for Undergraduate Education, in a leadership role for the 2008-09 NEASC self-study, Chair of the University Undergraduate Curriculum Northeastern University / Bouve College of Health Sciences, School of Pharma
Committee, a co-Chair of the University Retention Committee, a Co-Chair of the Bouve College Strategic Planning Committee and many senior search committees (Q4).

At the school level, Dean Reynolds is supported by his leadership team, which consists of two department chairs; an Assistant Dean for Academic Affairs; Directors of assessment, the office of experiential education, undergraduate education and professional programs, graduate education, continuous professional development; and an administrative operations manager. This group forms the Executive Leadership Committee, which meets regularly to consider and resolve a variety of operational, academic, and development issues (Q3).

As an Associate Dean in the BCHS, Dean Reynolds has been actively involved in several College discussions and initiatives focused on boosting interprofessional educational such as curricular revision, the development of the Goldstein Stimulation Center and the Bouve College Health Van. Dean Reynolds works tirelessly to boost the profile of the School across the country and has proved adept at advocating for the resources to grow the faculty and physical facilities for the School. In 2013, the School celebrated its 50th Anniversary and Dean Reynolds led a large fundraising campaign that facilitated a number of student scholarships and the committee that produced a series of celebratory events over the year. Both the number and quality of faculty in the School has grown tremendously over the past 8 years (See standards 24 and 25). Internationally recognized researchers in the areas of outcomes research, nanotechnology, and neuropharmacology have joined the faculty. In 2012, Dean Reynolds led a very successful relocation of the school to 140 The Fenway. This facility, that is a great improvement over the facilities that existed in the Mugar building, contains the faculty offices and labs needed to drive the School’s academic success and for the first time provides the School with a beautiful and functional space to interact with the outside community. Dean Reynolds is actively committed to strategic planning given that in 2012 he convened a successful school-wide strategic planning retreat engaging all faculty at the school (See standard 2). In response to a time of decreasing applications via the traditional 0-6 pathway, Dean Reynolds led the development of a Direct Entry Graduate pathway to improve the quality of the students in the PharmD program (and manage their numbers effectively). (Q5, 6).

Across the AACP faculty surveys that have been completed between 2009-2014, the vast majority of faculty are in agreement that Dean Reynolds has clearly defined responsibilities, that the School’s administrator’s function as a unified team and that the Dean is an effective leader of the School. The faculty review of Dean Reynolds that was administered by the University Senate in 2011 was very positive (Q6, 7).

4. College or School’s Final Self-Evaluation

☑Compliant  ☐Compliant with Monitoring  ☐Partially Compliant  ☐Non-Compliant

5. Recommended Monitoring

(School comments begin here)
9. The Goal of the Curriculum

The college or school's professional degree program curriculum must prepare graduates with the professional competencies to enter pharmacy practice in any setting to ensure optimal medication therapy outcomes and patient safety, satisfy the educational requirements for licensure as a pharmacist, and meet the requirements of the university for the degree.

The curriculum must develop in graduates knowledge that meets the criteria of good science; professional skills, attitudes, and values; and the ability to integrate and apply learning to both the present practice of pharmacy and the advancement of the profession. Graduates must be able to identify and implement needed changes in pharmacy practice and health care delivery.

2. College or School's Self-Assessment

<table>
<thead>
<tr>
<th>Description</th>
<th>Satisfactory</th>
</tr>
</thead>
<tbody>
<tr>
<td>The curriculum prepares graduates with the professional competencies to enter pharmacy practice in any setting to ensure optimal medication therapy outcomes and patient safety, satisfies the educational requirements for licensure as a pharmacist, and meets the requirements of the university for the degree.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The curriculum develops in graduates knowledge that meets the criteria of good science; professional skills, attitudes, and values; and the ability to integrate and apply learning to both the present practice of pharmacy and the advancement of the profession.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The curriculum fosters the development of students as leaders and agents of change. The curriculum helps students embrace the moral purpose that underpins the profession and develop the ability to use tools and strategies needed to affect positive change in pharmacy practice and health care delivery</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>In developing knowledge, skills, attitudes, and values in students, the college or school ensures that the curriculum fosters the development of professional judgment and a commitment to uphold ethical standards and abide by practice regulations.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The college or school ensures that the curriculum addresses patient safety, cultural competence, health literacy, health care disparities, and competencies needed to work as a member of or on an interprofessional team.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Curricular content, instructional processes, course delivery, and experiential education are documented, aligned, and integrated where appropriate.</td>
<td>Satisfactory</td>
</tr>
</tbody>
</table>

3. College or School's Comments on the Standard

Focused Questions

☑ A description of the college or school’s curricular philosophy

☑ A description of how the curriculum fosters the development of students as leaders and agents of change and helps students to embrace the moral purpose that underpins the profession and develop the ability to use tools and strategies needed to affect positive change in pharmacy practice and health care delivery.

☑ How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard.
Goal of the NU Doctor of Pharmacy Curriculum

The goal of the Doctor of Pharmacy curriculum is to prepare graduates for the present and future practice of pharmacy and the advancement of the profession by providing a strong foundation in science and practice that stresses integration and application. Graduates will be prepared to deliver patient-centered care, provide safe and effective medication therapy management, work as members of interprofessional teams, and make significant contributions to contemporary health care environments.

Curricular Philosophy

Our curricular philosophy aims to prepare students with the fundamental knowledge, skills and attitudes for a variety of careers in pharmacy practice and the pharmaceutical sciences. We use didactic, experiential and co-curricular opportunities throughout the professional program that emphasize active learning and reflection. We encourage students to personalize their education through thoughtful selection of experiential sites, elective courses and capstone projects. This philosophy was developed by the curriculum committee and approved by SOP faculty. (Q1)

This curricular philosophy fits within our school’s mission (see Standard 1) and the University’s mission to educate students for a life of fulfillment and accomplishment, and create and translate knowledge to meet global and societal needs. (Q2)

Fostering Leadership Development

The curriculum fosters the development of students as leaders and agents of change through several opportunities. While on co-op/IPPE, students are exposed to practice opportunities that allow them to mature professionally and take ownership of different products developed during the co-op. The combination of these early co-op/IPPE experiences and the APPEs help shape a mature student with greater focus on what they want to do and consider changes in practice to advance patient care. Numerous professional electives (see Standard 13) and extracurricular opportunities exist that foster professional leadership and advocacy to promote healthcare improvement. Our capstone requirement also facilitates leadership by allowing students to work alone or in groups to develop and implement a project (see Standard 13). We also cultivate leadership by developing reflective practitioners beginning early in the curriculum with a mandatory portfolio assignment. As students progress, the portfolio requires annual meetings with advisors and provides for targeted reflections on practice experiences and participation in professional activities. Research opportunities also allow students to take ownership for their role in a project and develop project leadership skills. (Q2)

Overview of Curriculum

We have developed a dynamic curriculum that integrates the basic sciences with the applied pharmaceutical and clinical sciences and the classroom with real-world experience. Our curriculum is unique in four key ways and represent key strengths of our program. First, we are a predominantly 0-6 program with students expressing interest in pharmacy prior to admission as college freshmen. This is considered a strength by many since students come to the University often with a pre-commitment to
the profession that they have been exposed to during their pre-Collegiate education and experiences. These are the early adopters, if you will, of the profession and who benefit greatly by being nurtured and socialized early in their pursuit of the profession. (Q2)

Second, our signature co-op/IPPE program integrates three structured, paid, early education experiences throughout the curriculum (further described in Standard 14). These competitive 4-month experiences provide students with learning opportunities to observe and train in community, hospital, and elective pharmacy settings. The program involves monitoring of student outcomes and student/preceptor feedback. The SOP’s experiential education fits well with the larger University’s focus on using experiential education to integrate the classroom with the real world. Such an educational focus makes a Northeastern education transformative, with countless opportunities for students to explore their path, discover their passion, and grow intellectually. (Q3,4)

A third unique aspect of our program is that we are achieving a national reputation for contributing to the scholarship of teaching and learning (see Standard 11). Our faculty is continually using and evaluating innovative educational strategies and technologies to promote student activation in and outside the classroom and to assess student learning. To assist in this and other types of scholarship, several faculty members are offering students research opportunities: research cooperative education experiences, research APPEs, and directed study research. This is yielding more students involved in research presentations and publications. (Q4)

A fourth area of uniqueness is our exemplary growth in research enterprise which ranges from drug discovery research and its particular focus on applications of nanotechnology, to clinical research and scholarship of teaching and learning. Our funded research brought between 7.3 to 10.8 million dollars each year between 2011 and 2013. Such research expertise has been brought into the classroom teaching of basic sciences, health systems sciences, and clinical courses. Our pharmacy students take advantage of tremendous opportunities to participate in faculty research (See Appendix 9.1.1) with many of the posters and publications by our faculty involving student co-authors. (Q4)

Our curriculum has similarities to that of other pharmacy programs. All students take required coursework on the core foundations of the basic sciences and several liberal arts courses expanding their sense of diversity of the human experience. In the P1 and P2 years, students gain an understanding of how medications are processed and impact healthy and unhealthy biological systems (pharmacology/medicinal chemistry, pharmaceutics, biopharmacokinetics, and immunology). Students are also introduced to the basics of good science in their science and research methods courses. In the P2 and P3 years, students take practice-related courses that develop therapeutic content, approach, and context for their work as practitioners. The P4 year consists of six 6-week advanced experiential rotations in a variety of practice settings including required inpatient, ambulatory and community settings. (Appendix 9.2.1) (Q3)

**Overview of Curricular Outcomes**

The curriculum enables students to achieve our ABOs as documented by periodic assessment and mapping activities (Appendices 9.9.1 and 9.9.2). In 2014, the SOP decided to replace the existing ABO statements (Appendix 9.1.2) with the 15 educational outcomes statements put forth by the Center for the Advancement of Pharmacy Education (CAPE) (see Appendix 9.1.1 and Standard 12). These now serve as the programmatic outcomes and as the basis for future assessment activities. The curriculum has been mapped to the ABOs as shown in the appendix and our assessment finds all outcomes covered by required curricular and co-curricular activities. (Q3)
The SOP curriculum committee monitors the extent to which the curriculum addresses important themes such as patient safety, cultural appreciation, health literacy, health care disparities and interprofessional competencies. Our systematic curricular review process provides ongoing review of syllabi and teaching methodologies to ensure content and processes are current, integrated, and flow across the curriculum. This curricular review process and feedback from our current students and alumni have guided the development of several recent curricular changes (see Standard 10). Our increased integration and modernization of the curriculum improves the sustainability of student learning, the flexibility with which students can take electives and experience more manageable course loads.

The 2014 results of the alumni survey indicate that 93% of the respondents strongly agree or agree that when they were students they knew what the program outcomes were. This agreement is consistent with our previous data and national and peer comparison data. (Q5)

The 2014 results of the graduating student survey indicates that 95% of the respondents reported that they strongly agree or agree that the NU program provides opportunities to develop professional attitudes, ethics, and behaviors. This agreement is consistent with our previous data and national and peer comparison data. (Q5)

Over the past 5 years our NAPLEX results were similar or above the national pass rates and demonstrate that our program is achieving our desired outcomes (See Appendices 9.5.1-9.8.1). MPJE pass rates over the past 5 years have ranged from 76 to 94% and are slightly below the national averages (See Appendix 9.4.1). Our 2014 annualized pass rate was 93.1% (national 94.35%), which is the lowest pass rate in the past 5 years for our school. These data as well as lower than national MJPE results have prompted conversations in the SOP Executive, Curriculum and Assessment committees. The curriculum plan for the graduating class of 2014 was the same as for the 5 cohorts before it (i.e. new curriculum has not yet been implemented for this class). We will continue to carefully monitor NAPLEX and MPJE rates. Additionally, we are evaluating novel delivery methods for jurisprudence instruction (including a hybrid course or a course later in the curriculum) and improvements in NAPLEX preparation. (Q5)

4. College or School's Final Self-Evaluation

☑ Compliant ◯ Compliant with Monitoring ◯ Partially Compliant ◯ Non-Compliant

5. Recommended Monitoring

(School comments begin here)
We will continue to monitor NAPLEX and MPJE pass rates.
10. Curricular Development, Delivery, and Improvement.

The college or school’s faculty must be responsible for the development, organization, delivery, and improvement of the curriculum. The curriculum must define the expected outcomes and be developed, with attention to sequencing and integration of content and the selection of teaching and learning methods and assessments. All curricular pathways must have both required and elective courses and experiences and must effectively facilitate student development and achievement of the professional competencies.

The curriculum for the professional portion of the degree program must be a minimum of four academic years or the equivalent number of hours or credits. The curriculum must include didactic course work to provide the desired scientific foundation, introductory pharmacy practice experiences (not less than 5% of the curricular length) and advanced pharmacy practice experiences (not less than 25% of the curricular length).

2. College or School’s Self-Assessment

<table>
<thead>
<tr>
<th>Statement</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>The college or school's faculty is responsible for the development, organization, delivery, and improvement of the curriculum.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The curriculum defines the expected outcomes and is developed with attention to sequencing and integration of content and the selection of teaching and learning methods and assessments.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>All curricular pathways have both required and elective courses and experiences and effectively facilitate student development and achievement of the professional competencies.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The curriculum for the professional portion of the degree program is a minimum of four academic years or the equivalent number of hours or credits.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Introductory pharmacy practice experiences are not less than 5% (300 hours) of the curricular length.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The advanced pharmacy practice experiences are not less than 25% (1440 hours) of the curricular length.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>On behalf of the faculty, the Curriculum Committee (or equivalent) manages curricular development, evaluation, and improvement to ensure that the curriculum is consistent with the collective vision of the faculty and administration.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Learning outcomes for curricular courses and pharmacy practice experiences are mapped to the desired competencies and gaps and inappropriate redundancies identified inform curricular revision.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Curricular design allows for students to be challenged with increasing rigor and expectations as they matriculate through the program to achieve the desired competencies. The curriculum design enables students to integrate and apply all competency areas needed for the delivery of holistic patient care.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The Curriculum Committee (or equivalent) is constituted to provide balanced representation from all departments, divisions, and/or disciplines within the college or school.</td>
<td>Satisfactory</td>
</tr>
</tbody>
</table>
Faculty members are aware of the content, competencies, and learning outcomes for each other's courses and use that information to optimize these elements within their own courses. Satisfactory

The curriculum complies with university policies and procedures and the accreditation standards. Satisfactory

Student representation and feedback are integral parts of curricular development and improvement. Satisfactory

The Curriculum Committee (or equivalent) has adequate resources to serve as the central body for the management of orderly and systematic reviews of curricular structure, content, process, and outcomes, based on assessment data. Satisfactory

3. College or School's Comments on the Standard

**Focused Questions**

☑️ A description of the curricular structure, including a description of the elective courses and experiences available to students

☑️ How both the didactic and experiential components comply with Standards for core curriculum and IPPE and APPEs in regard to percentage of curricular length

☑️ Any nontraditional pathway(s) leading to the Doctor of Pharmacy degree (if applicable)

☑️ Data that link teaching-and-learning methods with curricular outcomes

☑️ How the results of curricular assessments are used to improve the curriculum

☑️ How the components and contents of the curriculum are linked to the expected competencies and outcomes through curricular mapping and other techniques and how gaps in competency development or inappropriate redundancies identified inform curricular revision

☑️ How the curricular design allows for students to be challenged with increasing rigor and expectations as they matriculate through the program to achieve the desired competencies and how the curriculum design enables students to integrate and apply all competency areas needed for the delivery of holistic patient care.

☑️ How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard

☑️ Any other notable achievements, innovations or quality improvements

☑️ Interpretation of the data from the applicable AACP standardized survey questions, especially notable differences from national or peer group norms

(School comments begin here)

**DRAFT 2**

The current Doctor of Pharmacy curriculum is comprised of 72 credit hours in the two pre-professional years and 132 credit hours in the four professional years (Appendix 10.3.1). Of the 204 credits in the program, 36 (6.8%) are elective, 154 are didactic (75.5%) and 36 are required APPEs (17.7%). Students complete 3 IPPEs via participation in the University’s signature Cooperative Education (Co-op) program. Students also complete the NU Core requirement ([http://www.northeastern.edu/registrar/nucore.html](http://www.northeastern.edu/registrar/nucore.html)) including a 4 SH capstone project. As part of a SOP requirement, students must also take 10 SH of elective coursework including at least 2 SH of designated Professional Elective credit. (see Appendix
10.3.2). All course credits are based on the university standard (one semester hour = 50 minutes in class or three hours in lab per week). (Q1,2)

The SOP faculty has ultimate responsibility for the development, organization, delivery, assessment and improvement of the curriculum, as governed by the school’s Curriculum Committee (CC). All faculty who responded to 2014 AACP Faculty survey agreed/strongly agreed that they are consulted on curricular matters. The CC represents faculty from both academic departments and is comprised of eleven voting members including a student, an alumnus, the Director of Undergraduate and Professional Programs and the chairs of the Departments of Pharmacy and Health Systems Sciences and Pharmaceutical Sciences. The school Dean, the Director of Assessment and a representative from the Office of Student Services are non-voting members of the committee (Appendix 10.1.1). In addition to yearly charges, the CC also reviews existing courses when issues arise, in the event of substantive course change, or once per 6-year cycle as outlined in the process for Systematic Course Review (Appendix 10.3.3).

The business of the committee is led by a chair and the CC reports to the SOP regularly at faculty meetings. Recommendations made are brought to the entire faculty for discussion and vote prior to implementation. Charges and accomplishments of the 2014-2015 committee are detailed in (Appendix 10.2.1). (Q8, 10)

As part of the co-op program, students complete two required and one elective IPPEs (12 months of full-time work, 1920 hours over 3 academic semesters). Students are required to complete a 4-month experience in each of the community pharmacy, institutional pharmacy and elective settings. Typically, each experience consists of full time employment in a professional setting allowing for in-depth exposure to pharmacy practice, and development of professional networks and behaviors. Please see additional information about IPPE and APPE programs in Standard 14. IPPE comprises 3 of 11 required semesters in the professional years of the program (27%). (Q2)

APPEs are offered over 7, six-week blocks in the P4 year of the program. Students are required to complete six APPE rotations: one in each of three areas: acute care, ambulatory care, and community pharmacy; one health systems selective APPE; and two elective APPEs, providing 1440 hours of advanced experiential education. APPE comprises 36 of 132 (27%) required academic credits in the professional years of the program. Pharmacy practice experiences are described in further detail in Standard 14. (Q2)

The program is designed to develop practice-ready pharmacists who can apply scientific information to provide care to patients and populations. The SOP has used ABOs to guide curricular development and assessment for many years. The SOP syllabus template (Appendix 10.3.4) includes which programmatic outcomes are taught and assessed in the course. These lists and all parts of the syllabi are reviewed as part of the Systematic Curricular Review process. Each course in the curriculum has also been mapped to the school programmatic outcomes (see standard 9). Results of this mapping are periodically discussed by the AC and CC where recommendations are made for course or curricular revision. One example of this process was identification of low frequency of coverage of population health promotion.

As a result, in 2010, a required project was added to the Comprehensive Disease Management (CDM) Seminar course and students now apply this content as they research and design an intervention to improve the health of a target population in a local Boston community (Q5, 6).

The teaching methods used in the program seek to develop students’ ability to create and communicate care plans, problem solve and maintain professional competence. Laboratory courses use simulated patient actors to allow students to demonstrate communication skills, professionalism, and critical
thinking. In CDM Seminar sections students apply concepts to patient cases in a variety of settings. Several elective courses use the problem-based or team-based learning methodology, encouraging students' self-awareness and problem solving skills. Active learning is used extensively throughout the curriculum including in the CDM series where at least 2 class sessions in each semester are reserved for large group active learning sessions. See Standard 11 for more detail on teaching and learning methods. (Q 4-6)

We pay particular attention to sequencing and integration of course material across scientific disciplines and practice areas. In addition to mapping to programmatic outcomes, targeted curricular mapping exercises are completed when relevant and needed. This information is discussed by members of the school AC and CC and, when taken with data from other sources, has been used to improve the content and course sequencing, as described below. (Q5)

Student feedback also informs decisions. In addition to holding voting membership on school standing committees, students provide feedback through several forums: town hall style meetings, exit surveys, university-administered instructor evaluations, and informal meetings with school administration, co-op advisors and BCHS student services advisors. The SOP also has a policy of student conducted, mid-semester course review (See Standards 3 and 15). The school Dean also meets with each class at least once a year, invites students to have a dialogue with him at the beginning of each academic year, and has open office hours for students. The Assistant Dean for Academic Affairs is the faculty liaison to the Pharmacy Student Governing Organizations (PSGO), which is comprised of all leaders from all pharmacy student classes, and organizations. (Q5)

2012 Major Curriculum Revision (Q9)

A notable example of changes that resulted from our curricular and assessment process is the 2012 major curriculum revision. In 2011, the CC began discussions to revise the PharmD curriculum. Work progressed over the subsequent year and resulted in a revised curriculum plan that was approved by the SOP faculty on May 16, 2012. Design of the revision was a result of feedback from a number of areas including faculty, alumni and student survey data, curriculum mapping and assessment information, and recommendations from the school faculty. This revision addressed a number of specific aims and offered students increased opportunities for a personalized education plan as it sought to:

- Introduce more flexibility by allowing additional elective options in the professional years of the program and increasing choice in how students complete the capstone requirement. This revision enables students to personalize their education plan (Strategic Goal 1.1) by allowing selection of a capstone project of interest rather than having one project assigned to a single course in the spring semester of the P3 year. Students also have the ability to start working toward completion of their capstone earlier than the P3 year.
- Improve course sequencing:
  - In order to improve preparedness for IPPE, applicable introductory content from the Drug Information and Evaluation course (P2) and Educational and Behavioral Interventions in Pharmacy Practice (P1) courses was moved into the Introduction to Pharmacy Practice course (PrePh-2). The laboratory component was also moved to allow students to interact with simulated patients and practice communication skills before entering co-op to learn to provide pharmacy services in the IPPE setting.
  - To improve student retention of material in the area of infectious diseases, content from several courses including Medical Microbiology (PrePh-2) and pharmacology of anti-infective drugs (P1) were combined and moved later in the curriculum to the new Anti-Infectives course (P2). This new course directly
• Several other topics were moved to balance workload and ensure adequate coverage including topics in the Research Methods and Drug Information and Evaluation courses and pharmacogenomics content in Biopharmaceutics and Pharmacology / Medicinal Chemistry courses.

• **Emphasize pharmacotherapy process and improve efficiency in course delivery** through streamlining of the CDM course series. This series was revised from two 4 SH courses with 2 exams each per semester, to one 6 SH course with 3 exams per semester. This improved pace and workload associated with the course. Also the modification supported the development of critical thinking with class periods devoted to in-class, applied, discussion-based activities each semester.

• **Encourage professional development while allowing students to pursue areas of interest:** Students are required to complete 2 SH of professional elective credit to complement the reduction in credits from the CDM course. This also created motivation and market for creation of additional pharmacy-related elective courses, an area of need as identified via AACP survey data.

The class of 2016 will be the first class which will fully experience the most recent curricular revision. Despite this, our survey data has already began to show improvement in student attitudes regarding course sequence (agreement increased from 78% in 2010 to over 90% in 2012-2014), and pharmacy electives (agreement increased from 66% in 2010-12 to 80% in 2014) Several new pharmacy electives (Self Care and Nonprescription Medications: A Team-Based Approach, Leadership and Advocacy in Health Professions, Exploring Academic Careers, Contemporary Issues in Geriatric Pharmacy, Principles of General Medicine, and Special Topics: Pharmaceutical Industry) have been developed in response to student feedback gathered via surveys and in town hall meetings. This allows students to increase flexibility within the curriculum and personalize their education based on elective interests. (Q6, 9, 10)

Results from the AACPs Faculty Survey indicate that nearly 100% believe that our curricular structure and organization are clear. Throughout the process of curricular revision, discussions and a number of initiatives were aimed at ensuring that faculty have a better knowledge of each other’s contribution to the curriculum and to further encourage collaboration which was reflected by an improvement in faculty attitudes on 2014 survey. (Q10)

Examples of efforts aimed at increasing students’ understanding of the curricular design include: a new yearly orientation for P1, P2, and P3 students focused on the curriculum; the creation of a curriculum presentation to provide insight into the order of courses or relevance of a course within the program; and the implementation of a new Curriculum and Assessment newsletter. In 2014, 95% of faculty agreed or strongly agreed that they understood how their instructional content fits into the curriculum (up from 86% in 2013) and nearly 90% of the faculty felt that curricular collaboration among disciplines was encouraged (up from 68% in 2014). Additionally 83% of faculty reported agreement that the school uses programmatic assessment data to improve the curriculum in 2014 (72% in 2010). We will continue to monitor our alumni survey with anticipated changes in perceptions after the class of 2016 graduates. (Q5)

The curriculum has been strategically designed to challenge students with increasing rigor and expectations as they progress. Such examples include General Chemistry in the first Pre-Ph 1year, followed by Organic Chemistry in the Pre-Ph2. This allows for the foundational knowledge students will need as they enter into Medicinal Chemistry in the P1 year. Furthermore, introductory content from the Educational and Behavioral Interventions in Pharmacy Practice and Drug Information Evaluation courses

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have been moved earlier in the curriculum to allow for application during co-op while being taught at a higher level in the two subsequent courses. Another example is the placement of pharmacology I and II in the P1 year, setting the groundwork for CDM in the P2-P3 year. Following the P3 year, is the APPE year when students go out into the clinical arena to apply their classroom knowledge. Such strategic progression allows for an increase to higher-level Bloom's taxonomy from the pre-professional to the professional years. (Q7)

As described above, the SOP has an effective process to manage curricular affairs. These processes result in a program that strives to provide a solid foundation for pharmacy careers but retains flexibility and opportunities for students to develop personal areas of interest. (Q8)

Notably, the School has formalized the Director of Undergraduate and Professional Programs to manage curricular issues (See Standard 7). It is also noteworthy that Northeastern’s unique co-op program allows students to complete the IPPE requirement by participating in professional practice for up to 12 months. Lastly, the CC uses a diligent process to seek additional input from outside experts on matters of a specialized nature and pays close to sequencing and integrating course material across scientific disciplines and practice areas. Our faculty commitment to the continuous quality improvement of teaching is evidenced by participation in peer and self-evaluation, and the variety of teaching styles and technological tools used, many of which have been presented as teaching innovations and/or posters at AACP meetings (see Standard 11). (Q9)

4. College or School's Final Self-Evaluation

| Compliant | Compliant with Monitoring | Partially Compliant | Non-Compliant |

5. Recommended Monitoring

(School comments begin here)

While we find ourselves compliant with all aspects of this standard, we plan to monitor the implementation of the new curriculum and the achievement of our ability based outcomes. Capstone implementation and the breadth of capstone options will be monitored. We will be paying particular attention to the feedback from AACP surveys, performance of our students on IPPEs and APPEs, board pass rates and other metrics reflective of student success. The impact of the new curriculum on the Direct Entry students (graduate students entering into P1 year) will also be evaluated.
11. Teaching and Learning Methods

The college or school, throughout the curriculum and in all program pathways, must use and integrate teaching and learning methods that have been shown through curricular assessments to produce graduates who become competent pharmacists by ensuring the achievement of the stated outcomes, fostering the development and maturation of critical thinking and problem-solving skills, meeting the diverse learning needs of students, and enabling students to transition from dependent to active, self-directed, lifelong learners.

2. College or School's Self-Assessment

<table>
<thead>
<tr>
<th>The program, throughout the curriculum and in all pathways, uses and integrates teaching and learning methods that have been shown through curricular assessments to meet the diverse learning needs of students and produce the desired professional competencies and outcomes, including the development and maturation of critical thinking, problem-solving, and self-directed, lifelong learning skills.</th>
<th>Satisfactory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty members use a variety of teaching and learning techniques (e.g., active learning, case studies, etc.) that have been thoughtfully selected, designed, and/or tailored to help students achieve the learning outcomes articulated for their courses.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The college or school evaluates the effectiveness of its curricular innovations through its assessment activities.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The outcomes of the distance-learning activities are appropriate for the student population and achievable through distance study.</td>
<td>N/A</td>
</tr>
<tr>
<td>Teaching and learning methods used assure that learning experiences, opportunities, and outcomes are comparable for all pathways, branches or campuses.</td>
<td>N/A</td>
</tr>
</tbody>
</table>

3. College or School's Comments on the Standard

Focused Questions

☑️ A description of teaching and learning methods and strategies employed in the delivery of the curriculum, including nontraditional pathway(s) leading to the Doctor of Pharmacy degree (if applicable), and how those methods are expected to advance meaningful learning in the courses in which they are employed.

☑️ Efforts of the college or school to address the diverse learning needs of students

☑️ The formative and summative assessments used to evaluate teaching and learning methods used in the curriculum, including nontraditional pathway(s) leading to the Doctor of Pharmacy degree (if applicable)

☑️ How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard

☑️ Any other notable achievements, innovations or quality improvements

☑️ Interpretation of the data from the applicable AACP standardized survey questions, especially notable differences from national or peer group norms
The NU PharmD curriculum is delivered with a variety of teaching and learning methods. In a 2012 survey, the most frequently used classroom techniques were traditional lecture, the Blackboard Learning Management System (Blackboard, Inc, Washington, DC) discussion board feature, and audience response software (“clickers”). In the experiential setting, the most frequently used techniques were peer teaching, case discussion, and team-based learning. The survey results are included in Appendix 11.3.1 (Q1).

Active learning (AL) methods are included throughout our curriculum. Based on a 2014 survey (Appendix 11.2.1) of all SOP faculty who participate in required or elective courses (n=44; response rate 52%), 80% of those surveyed routinely use a low intensity, in-class AL strategy (e.g., free write, question and answer format, think-pair-share, muddiest point); higher complexity strategies such as role playing, debates, concept maps, flipped classrooms, jigsaw and team-based learning are used occasionally. The most frequently used AL techniques in addition to those described above were peer teaching, case discussion and team-based teaching. Student and alumni surveys conducted from 2009 to 2014 consistently reveal that the curriculum provides opportunities for AL (100% student agreement in 2014 and alumni agreement in 2012) and that students are encouraged to ask questions in class. Faculty, preceptor, and alumni survey results show consistent agreement (similar to national data) that students are encouraged to assume responsibility for their own learning. Many of the University’s classrooms are furnished with fixed, lecture setups, presenting a challenge to faculty who wish to engage students in collaborative exercises or other AL strategies. Despite this, our faculty find ways to engage students with active participation in class. (Q 1, 6)

A number of active learning strategies employed by the faculty are noteworthy and some have been evaluated and reported in peer-reviewed papers (published papers indicated by superscript numeral and listed in Appendix 11.4.1 ). Scholarship of Teaching and Learning (SOTL) is a strength of our faculty.

Noteworthy examples of active learning include (Q5):

1) CDM Seminars and Skills Labs: These courses apply and expand information from the CDM lecture course. In seminars, students work in small groups to assess patient cases and complete projects that require the application of course content to a contemporary issue (e.g., Public Health Program Project34 and Public Service Announcement Videos12) and/or evaluation of drug information literature (debates, journal clubs). To better prepare students for APPEs in institutional pharmacy practice, the Skills Laboratory in the P2 and P3 years was restructured to include simulations of integrated pharmacy practice. Use of MEDITECH software (donated by Medical Information Technology, Inc, Westwood, MA) allows for the integration of electronic health records into the laboratory and seminar experience. MEDITECH is used extensively in the IPPE /APPE hospitals in our program. In 2010, the laboratory skills course was redesigned to include a fully functional electronic health record system with the capability of providing access to patient demographic data, medication information, laboratory data, progress notes, and imaging results with graphic representations of patient data.37 Use of MEDITECH was added to the CDM seminar in 2015. As such, the courses offer a simulated electronic record environment with the opportunity for students to verify medication orders including sterile products, identify medication errors, and complete discharge medication education. Use of pre- and post-survey evaluations of MEDITECH Use in Skills Lab revealed notable improvements in the students’ levels of comfort and proficiency with use and application of an electronic health record in preparation for APPEs and subsequent employment.37
2) In the Introduction to Pharmacy Practice, Educational and Behavioral Interventions in Pharmacy Practice and Skills Lab courses: Simulation using standardized patients is used in 5 laboratory courses in the program, from immediately before the first IPPE to the last semester of the P3 year. Use of standardized patient activities improves communication skills over time and is positively received by students.6

3) Use of audience response system technology: For ten years, the school has been using the TurningPoint audience response system in many classes to enhance student participation and to gauge learning. Some faculty have also tested a variety of delivery and lecture methods,22, 23, 30 social media (e.g. Facebook28) and instant messaging technology42 to engage the class or improve communication.

5) Problem-based learning (PBL) involves the self-investigation of realistic problems relating to the student’s course of study. Using the PBL approach, students develop their own learning questions about the problem, investigate their own questions, self-evaluate their learning resources, and ultimately apply their self-acquired knowledge to solve the underlying problem. The PBL process addresses all of the domains of learning with attention to population-based health concerns, cultural and psychosocial factors, and financial and regulatory aspects of health care. As such, the student involved in PBL self-explores his/her knowledge, skills, attitudes and values about the health care system and patient care. Based on a Web-based survey of faculty in 2013, use of PBL as a teaching method has increased in the curriculum with at least one course (Contemporary Issues in Geriatric Pharmacy elective) entirely delivered using PBL.

6) Team Based Learning: Using this method, students are asked to explore content outside of class, then apply it during class through individual and group assessments, problem solving and discussion. It is used in the first-year Introduction to the Profession of Pharmacy course and in the Self-Care and Nonprescription Medications elective. (Q1)

The school addresses the diverse learning needs of student through use of the variety of teaching methods described above. In addition to AL, most courses in the professional curriculum are archived using lecture-capture technology (Tegrity) and recordings are available to students as a study aid. There is college-wide encouragement to use hybrid or “flipped” course models and support to assist faculty in development efforts. In the 2013-14 AY, at least 4 courses used a flipped classroom approach for all or part of the course. Recently, the SOP was awarded a NU Provost’s grant to expand the use of ExamSoft, an online testing and assessment program. Project goals are to design, administer and analyze online assessments and use mapping to link assessments to required ACPE appendices and programmatic outcomes. Better mapping will allow for students, instructors and advisors to generate “Strengths and Opportunities” reports. These assessment-based performance reports highlight areas of strength and opportunity mapped to categories within the system including course content, ABOs, and Blooms taxonomy levels. The team-taught Comprehensive Disease Management (CDM) course also uses a Faculty Guide (see Appendix 11.4.2) to encourage all faculty teaching in the course use principles of instructional design when developing objectives, assessments and instructional strategies to develop materials appropriate for diverse learners and a consistent style among all instructors. (Q2, 5)

In the 2013-14 AY alone, the Center for Teaching & Learning Through Research (CATLR) at the University provided 30 teaching/learning workshops; input was sought from the SOP concerning content of offerings to support SOP faculty development. Some of the programs were daylong offerings in which faculty were able to learn the pedagogy and also practice an innovative teaching method. Topics were
repeated throughout the year to accommodate faculty. Three sessions were devoted to flipping the classroom; others focused on integrating co-op into your class, discussion-based teaching and learning, identifying the students’ learning styles, active learning in large classes and using e-portfolios. (Q2)

The SOP routinely sponsors faculty workshops on innovative teaching methods and supports the scholarship of teaching and learning. The faculty advance their teaching skills and abilities to accommodate the diverse needs of students by experimenting with instructional methods, particularly those involving technology as we adapt to our digitally oriented student body. For example, in 2012, faculty in the Department of Pharmacy and Health Systems Sciences accepted an innovative, reflective teaching challenge formally proposed by the department’s Curriculum Task Force. In keeping with best-evidence in education, this initiative was grounded in two learning theories (i.e., diffusion of innovation theory, decomposed theory of planned behavior) and 7 learning principles (i.e., Seven Research Based Principles for Smart Teaching). All faculty in the Department of Pharmacy Practice were encouraged to try at least one “new to you” teaching method in a class, course or the experiential setting that was linked to at least 1 of the 7 research-based principles for smart teaching. The activities culminated in individualized, systematic reflections by each faculty member and voluntary presentations of the experience to faculty peers at a departmental meeting. Two Web-based survey instruments were used in 2013 to evaluate the initiative. Based on a response rate of 90% (n=28), the majority (67%) of participants tried 1 new strategy, 26% tried 2 and 6% tried 3 new strategies. The flipped classroom, inclusion of a new project in a course, and use of social media/back channel app (Facebook, Twitter, Todaysmeet.com) each accounted for 14.7% of the innovations, whereas use of YouTube videos, small group discussions, problem-based learning and role plays each accounted for less than 5% of the innovations. Overall, 75% of all teaching innovations required the use of technology. The project and its impact have been published in AJPE.45 (Q 1, 2)

All courses (with the exception of breakout sessions such as recitations and seminars) participate in mid-semester formative feedback and summative end-of-course evaluations (TRACE). The mid-semester feedback process is overseen by the Director of Assessment and is administered by the class representatives. Feedback is synthesized and communicated to the faculty. The University coordinates the TRACE end-of-course evaluation process. Students voluntarily complete online surveys and instructors may access aggregate reports at the close of each semester. TRACE evaluations contain a number of questions pertinent to instructional methods. See Standard 3 for more info and examples of these instruments. Faculty teaching in the Department of Pharmacy and Health Systems Sciences are expected to periodically use the Peer Observation and Evaluation Tool (POET)2,27 to obtain formative feedback on their didactic teaching (further described in Standards 3, 10 and 26). (Q3)

An important part of this standard is the use of a curriculum that facilitates the students’ ability to assume responsibility for their own learning including assessing their own learning needs, developing personalized learning plans and self-assessing their knowledge, skills and values. This is cultivated throughout the curriculum. In surveys of the student body conducted from 2009 to 2013 (response rates of 76%-98%), students have consistently agreed that the SOP encourages them to take responsibility for their own learning and that skills needed for continued learning are acquired during the professional program. in the freshman year, students are required to create a professional progression portfolio that is used to document application of knowledge and skills to a variety of professional opportunities and experiences. Students reflect upon the professional and curricular experiences over the past year, and meet with a designated portfolio faculty advisor to review their self-assessments of learning. These meetings are student-centered and often result in the development of customized career development plans that the student is empowered to actualize. For example, based on the student’s reflections on
learning, the faculty advisor may recommend shadowing opportunities to explore alternative career options or a specific co-op experience that supports the student’s current learning needs. The portfolio process is described further in standard 15. (Q4, 6)

This standard also pertains to the requirement for students to participate in the education of other health care providers, patients and fellow pharmacists. Activities specific to the education of patients are built into the IPPEs and APPEs such as discharge patient counseling, ambulatory care patient interviews, medication reconciliation and inservice education of nurses, physicians and pharmacists. Starting in 2015, all students in the required CDM 4 Skills Lab course will complete Interprofessional Curbside Consults. These activities apply content about roles and responsibilities of health professionals to sessions with simulated health professionals. In each session, a role-played health professional (eg, RN, PT, NP, Dentist) asks the pharmacy student a question. The student then applies drug information skills to answer the question, document the answer in writing, and present the response verbally in a format customized to the requester.

In addition to IP interactions in labs, on IPPEs and APPEs, students in BCHS may participate in IPE via many paths including:

- Choosing to live in IP housing via the college’s Living-learning communities
- The 2012 First Year Interprofessional Student Conference
- Arnold S. Goldstein Simulation Center – In 2013, BCHS opened a state-of-the-art simulation space designed to host IP simulations and debriefing activities. Groups of SOP students have occasionally used the space as part of IP pilot or demonstration projects and some laboratory courses have experimented with hosting task assessments in the space to expose students to the technology and potential opportunity in the center.

On AACP Surveys, students report multiple opportunities to learn with other health professionals. They feel ready to communicate with other professionals and work with the healthcare team to implement care plans. Also, preceptors and faculty generally agree that the PharmD program prepares students to communicate with patients and the health care team. (Q4,6)

4. College or School's Final Self-Evaluation

- Compliant
- Compliant with Monitoring
- Partially Compliant
- Non-Compliant

5. Recommended Monitoring

(School comments begin here)
12. Professional Competencies and Outcome Expectations

Professional pharmacist competencies that must be achieved by graduates through the professional degree program curriculum are the ability to:

1. Provide patient care in cooperation with patients, prescribers, and other members of an interprofessional health care team based upon sound therapeutic principles and evidence-based data, taking into account relevant legal, ethical, social, cultural, economic, and professional issues, emerging technologies, and evolving biomedical, pharmaceutical, social/behavioral/administrative, and clinical sciences that may impact therapeutic outcomes.

2. Manage and use resources of the health care system, in cooperation with patients, prescribers, other health care providers, and administrative and supportive personnel, to promote health; to provide, assess, and coordinate safe, accurate, and timesensitive medication distribution; and to improve therapeutic outcomes of medication use.

3. Promote health improvement, wellness, and disease prevention in cooperation with patients, communities, at-risk populations, and other members of an interprofessional team of health care providers.

These professional competencies must be used to guide the development of stated student learning outcome expectations for the curriculum. To anticipate future professional competencies, outcome statements must incorporate the development of the skills necessary to become self-directed lifelong learners.

2. College or School's Self-Assessment

<table>
<thead>
<tr>
<th>Professional Competencies 1, 2 and 3 guide the development of stated student learning outcome expectations for the curriculum.</th>
<th>Satisfactory</th>
</tr>
</thead>
<tbody>
<tr>
<td>The curriculum prepared graduates to provide patient care in cooperation with patients, prescribers, and other members of an interprofessional health-care team based upon sound scientific and therapeutic principles and evidence-based data.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The curriculum fosters an understanding of, and an appreciation for, the legal, ethical, social, cultural, economic, and professional issues, emerging technologies, and evolving biomedical, pharmaceutical, social/behavioral/administrative, and clinical sciences that may impact therapeutic outcomes.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The curriculum prepares graduates to manage and use resources of the health care system, in cooperation with patients, prescribers, other health care providers, and administrative and supportive personnel, to promote health; to provide, assess, and coordinate safe, accurate, and time-sensitive medication distribution; and to improve therapeutic outcomes of medication use.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The curriculum prepares graduates to promote health improvement, wellness, and disease prevention in cooperation with patients, communities, at-risk populations, and other members of an interprofessional team of health care providers.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Outcome statements include developing skills to become self-directed lifelong learners.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The curriculum prepares graduates to independently seek solutions to practice-based problems in the scientific and clinical literature.</td>
<td>Satisfactory</td>
</tr>
</tbody>
</table>
Graduates possess the knowledge, skills, attitudes, and values needed to enter practice pharmacy independently by graduation.  Satisfactory

3. College or School's Comments on the Standard

Focused Questions

- A description of the professional competencies of the curriculum
- A description of the assessment measures and methods used to evaluate achievement of professional competencies and outcomes along with evidence of how feedback from the assessments is used to improve outcomes
- How the curriculum is preparing graduates to work as members of an interprofessional team, including a description of the courses that focus specifically on interprofessional education
- How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard
- Any other notable achievements, innovations or quality improvements
- Interpretation of the data from the applicable AACP standardized survey questions, especially notable differences from national or peer group norms

(School comments begin here)

DRAFT 2

Achievement of the programmatic outcomes is integral to the vision of the school. Our ABOs, first adopted in 2003, underwent revision in 2010. In 2013, the SOP replaced the existing ABOs with the CAPE outcomes, which the faculty felt better reflect our desired graduate (Appendices 12.1.1-2). (Q1)

The didactic and experiential curricula have been mapped to each version of ABOs. In syllabi, instructors indicate which ABOs are covered and how they are assessed (formative or summative evaluations) (Appendices 12.3.1-4). This information is compiled and used to evaluate the need for curricular change. Most recent mapping found that each ABO was covered at least once in the didactic curriculum (Appendices 12.2.1-2).

The SOP AC is a standing committee that works with the CC to monitor achievement of professional competencies and outcomes. The AC oversees the assessment plan and collects and reviews data on educational outcomes in both the didactic and experiential settings (detailed in Standard 15). The AC, Director of Assessment, instructors of record, and students all assist in documentation of ABO achievement. The close working relationship between the AC and CC facilitates improvements in the curriculum, as shown by the 2012 revision (Standard 10). (Q2)

Faculty are asked to routinely evaluate achievement of course outcomes and modify methods of instruction as needed. Changes made are discussed during the Systematic Course review. Course-level assessment also allows instructors and administrators to identify at-risk students and discuss remediation plans. For experiential evaluations, the Director of the OEE reviews outcome data in collaboration with the AC. Reports are provided to the CC every 3 years (Standard 14). Students’ achievement of competencies has been assessed via examinations and quizzes, IPPE and APPE student reflections, and the portfolio process. In 2014, ExamSoft was adopted by some courses in the SOP, and this was extended to more courses in 2015. This software allows faculty to map assessments
to a variety of outcomes, including the program’s ABOs. Our goal is to use ExamSoft for testing and performance-based assessments in most required courses by 2016. This implementation will improve assessment of students’ achievement of ABOs. ABO achievement is also demonstrated via the portfolio process (Standard 15) and in evaluations used in IPPEs and APPEs (Standard 14). The SOP portfolio asks students to reflect on achievement of specific ABOs throughout each semester of didactic and experiential coursework with documentation for each ABO reflection and supporting artifacts at least twice at different points of the curriculum, but even more frequently for the ABOs in the affective domains. (Q2)

There are limited opportunities for IPE in the didactic curriculum. This area has been targeted for improvement. In 2014-15 the CC was charged to work closely with BCHS CC to determine how to expand IPE opportunities in the didactic curriculum. The systematic curricular review process (Standard 10) pays special attention to interprofessional (IP) course content and integration of IPE opportunities throughout the curriculum. Although there are several other health professions programs within the BCHS, IPE opportunities remain difficult to arrange due to the logistics of course sequencing and scheduling. To facilitate IP interaction, a committee of faculty from the BCHS health professions programs (including the SOP) was established in 2012. It is working to develop structured activities that promote IPE. As an example, the 2012 freshman IP conference on alcohol and substance misuse introduced first-year BCHS students to the principles of IPE. A publication (Appendix 12.5.1) described improved outcomes as measured by the validated Readiness for Interprofessional Learning Scale. In fall 2013, a module on oral health was added to the CDM course, and students were required to take an online tutorial and demonstrate competency via a quiz. This oral health module, which was part of the national Smiles for Life Curriculum, is a validated IP curriculum. Other IPE opportunities are integrated into the CDM skills lab course including IP Curbside Consults which ask students to learn about other healthcare professionals and then respond to their medication-related questions with professional communication based on a structured method. Several IP elective courses are available to students (see standard 10) as well as extracurricular activities with professional fraternities. Phi Lambda Sigma sponsored 2 IPE opportunities in 2013-2014 as well as extracurricular activities with professional fraternities. Phi Lambda Sigma is planning to bring the AHRQ TeamSTEPPS (http://teamstepps.ahrq.gov/) curriculum to NU in order to foster teamwork. Finally, with creation of the Arnold Goldstein Simulation Center, a new venue for IPE is available for students and faculty. (Q3)

Most of our IP interactions occur in the experiential settings on IPPEs and APPEs. The Director of Assessment has been collecting data regarding IP interactions and student attitudes in the experiential setting using a published and validated Interprofessional Socialization and Valuing Scale (ISVS, Appendix 12.5.2). The ISVS measures self-perceived ability to work with others, value in working with others, and comfort in working with others. Analyses of ISVS data reveal that our co-op/ IPPE model provides students with an early opportunity to build the IP competencies and values necessary for effective team-based care. Comparison of ISVS data before and after APPEs demonstrates development of positive attitudes toward other health professionals and the values of working with a health care team.

Despite limited IP options in the didactic curriculum, results from AACP student survey indicate that students do feel the PharmD program prepared them to work with the healthcare team to implement patient care plans. Responses to Qs10, 14, 21, 23, and 25 indicate that students feel prepared to function effectively in IP situations, with >90% agreeing or agreeing strongly with each statement. Similarly, Q30 of the preceptor survey and Q36 of the alumni survey showed a majority of respondents
agree that the curriculum prepares students to communicate with patients, caregivers, and other members of the IP team. However, while the majority of faculty members agreed with Q52 of the 2013 faculty survey that students are prepared for communication with patients, caregivers, and other members of the IP health care team, approximately 20% did not. In this survey, more faculty than previously cited “unable to comment,” resulting in a rate of strongly agree/agree that was lower than the national average. (Q3,6)

Processes are in place to maintain compliance with this standard. The AC and CC monitor trends in education and training and collaborate on initiatives that respond to these trends and improve the program. For example, in 2013 the new CAPE outcomes were evaluated and adopted by the SOP, and eventually integrated into the assessment plan and curriculum. Notably, this occurred prior to release of the ACPE 2016 standards, which puts a greater emphasis on the adoption of the CAPE outcomes. (Q4,5)

The breadth and depth of professional socialization that occurs as a result of NU’s IPPE/co-op is a strength of our program. It provides a unique opportunity for students to achieve our programmatic outcomes, allows a higher number of IPPE hours, and the opportunity to experience a variety of practice areas early in the curriculum. It integrates real world experience with didactic content and provides an early opportunity to become an effective member of team-based patient care. Completion of the Introduction to Pharmacy Practice course, 3 co-op/IPPE experiences and associated cyclical reflections lay a strong foundation for APPE participation and development of a practice-ready pharmacist. (Q5)

Results from the AACP Graduating Student survey indicate our students feel well prepared for entry into practice (97% agreed/ strongly agreed in 2014). Notable strengths of our program compared to national and peer cohorts include student readiness for working as part of the health care team, interpretation of epidemiologic and pharmacoeconomic data, and interpretation and application of drug use and health policy. The AACP faculty survey demonstrated generally positive perceptions of student preparation for entry into practice in comparison to national and peer comparators with the exception of student preparation in the area of informatics. This was corroborated by data from the preceptor survey. The AC has brought this to the attention of the CC and the leadership team. In short term response, lectures in informatics have been added to the Drug Information and Evaluation course and faculty discussions have begun to determine long term aims in this area. In the 2014 AACP Preceptor Survey, respondents strongly agreed/agreed that the PharmD program prepared students to manage systems of medication use and to promote the availability of health promotion and disease prevention initiatives at lower rates than peer and national comparators. While this is the first time we have noted these concerns, the AC has brought this to the attention of the CC, leadership, and the OEE. At the same time, the AACP alumni survey respondents felt adequately prepared in all areas, including managing systems for medication use and promoting the availability of health promotion and disease prevention initiatives. While more alumni feel they do not possess informatics expertise compared with other competencies, NU responses are similar to national and peer cohorts. (Q6)

4. College or School's Final Self-Evaluation

[ ] Compliant [ ] Compliant with Monitoring [ ] Partially Compliant [ ] Non-Compliant

5. Recommended Monitoring

(School comments begin here)
While we meet all of the elements of this standard, we are working on expanding IPE in our curriculum and will monitor the implementation and outcomes of IPE.
To provide the thorough scientific foundation necessary for achievement of the professional competencies, the curriculum of the professional degree program must contain the following:

- biomedical sciences
- pharmaceutical sciences
- social/behavioral/administrative sciences
- clinical sciences

Knowledge, practice skills, and professional attitudes and values must be integrated and applied, reinforced, and advanced throughout the curriculum, including the pharmacy practice experiences.

### 2. College or School's Self-Assessment

<table>
<thead>
<tr>
<th>The curriculum contains at an appropriate breadth and depth the necessary elements within the following areas as outlined in Appendix B of the Standards:</th>
<th>Satisfactory</th>
</tr>
</thead>
<tbody>
<tr>
<td>biomedical sciences</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>pharmaceutical sciences</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>social/behavioral/administrative sciences</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>clinical sciences</td>
<td>Satisfactory</td>
</tr>
</tbody>
</table>

The content of curricular courses is mapped to Appendix B to assess where specific content foundations are addressed in the curriculum. Gaps in curricular content and inappropriate redundancies identified in the mapping process inform curricular revision.

The didactic course work provides a rigorous scientific foundation appropriate for the contemporary practice of pharmacy.

Knowledge, practice skills, and professional attitudes and values are integrated and applied, reinforced, and advanced throughout the didactic and experiential curriculum.

The biomedical, pharmaceutical, social/behavioral/administrative, and clinical sciences are of adequate depth, scope, timeliness, quality, sequence, and emphasis to provide the foundation and support for the intellectual and clinical objectives of the professional degree program and the practice of pharmacy.

The sciences provide the basis for understanding the development and use of medications and other therapies for the treatment and prevention of disease.

Courses and other formal learning experiences are coordinated and integrated across disciplines.

Where instruction is provided by academic units of the university other than the pharmacy program, these areas are developed in accordance with the professional degree program's curricular goals and objectives; and assessment liaison mechanisms ensure effective instructional delivery and achievement of the educational objectives of the program.
3. College or School's Comments on the Standard

Focused Questions

- The curricular structure and content of all curricular pathways
- A description of the breadth and depth of the biomedical, pharmaceutical, social/behavioral/administrative, and clinical sciences components of the didactic curriculum, and the strategies utilized to integrate these components
- How the curricular content for all curricular pathways is linked to Appendix B of Standards 2007 through mapping and other techniques and how gaps in curricular content or inappropriate redundancies identified inform curricular revision
- Examples of assessment and documentation of student performance and the attainment of desired core knowledge, skills and values
- Evidence that knowledge, practice skills and professional attitudes and values are integrated, reinforced and advanced throughout the didactic and experiential curriculum
- How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard
- Any other notable achievements, innovations or quality improvements
- Interpretation of the data from the applicable AACP standardized survey questions, especially notable differences from national or peer group norms

(School comments begin here)

DRAFT 2

Students enter the Doctor of Pharmacy program at Northeastern University as freshmen or at the start of the P1 year (see Standard 17). The entry-level curriculum is comprised of courses in the biomedical sciences (20% or 41 SH), pharmaceutical sciences (17% or 34 SH), social/behavioral/administrative sciences (10%), clinical sciences (39%), and electives and the NU Core (9%). The majority of the students entering P1 year have spent the first two years at Northeastern University in the pre-professional curriculum, where we are able to exert greater influence over the pre-pharmacy coursework and ensure consistent preparation of students. Direct entry graduate students enter with a BS degree and must have completed all pre-pharmacy requirements (Q1).

During the first 2 pre-professional years, students are exposed to a rigorous science based curriculum focused on chemistry, biology, anatomy and physiology. These courses lay the groundwork for biomedical sciences. Our students also meet general education requirements of the NU Core. Adopted in 2007, the goal of the NU core curriculum is to develop knowledge and skills for students to be lifelong learners (see http://www.northeastern.edu/registrar/nucore.html). As described by the University, the early core requirements (comparative cultures, level 1 knowledge domains, first-year writing, and level 1 mathematical/analytical thinking) and the experiential learning requirement, encourage a breadth of exposure. Intermediate and advanced requirements are deeper, focused experiences. (Q1, 2)

Curricular content can be described by themes thread throughout the program. The professional socialization of students begins in the first pre-professional year with the first year seminar. This course, College: An Introduction, is taken by all BCHS students, helps acclimate first-year students to the collegiate experience, and begins to develop professionalism, the spirit of a healthcare provider and interprofessional collaboration (see standard 12). First year students also take Introduction to
the Profession of Pharmacy which examines pharmacists’ responsibilities, pharmacy organizations, ethical issues related to health care, the education of pharmacists, and pharmacists’ roles in health-care systems. The American Pharmacists Association Career Pathway Evaluation Program is utilized in this course as well. In the second pre-professional year, students take Introduction to Pharmacy Practice with laboratory. This course prepares students for their first co-op/IPPE and covers workplace issues including diversity, sexual harassment, ethics, and confidence of information. In addition, the course introduces students to the technical knowledge and skills required for pharmacy practice, including introductory sterile compounding and drug information. The lab uses standardized patient simulation to develop professional communication skills. (Q1, 2)

The pharmaceutical sciences foundational courses (Pharmaceutics, an integrated Pharmacology/ Medicinal Chemistry course (including toxicology and pharmacogenomics), Biochemistry, Pharmacokinetics/biopharmaceutics, Immunology, Antiinfectives) build on the biological sciences foundation. The Anti-infectives course is a new course combining the microbiology, pharmacology and medicinal chemistry of these agents. The course content was moved later in the curriculum as part of the 2012 major curriculum revision to allow students to better synthesize concepts as they are immersed in the CDM sequence. Toxicology and pharmacogenomics content have been integrated into the Pharmacology/Medicinal chemistry, Antiinfectives and the CDM courses. (Q1, 2, 7)

The social/administrative sciences sequence builds on concepts introduced in the 1st and 2nd pre-professional years including information about the history of pharmacy and professional tenets in the Introduction to the Professional Course and continue with drug information and communication skills concepts in the Introduction to Pharmacy Practice course. These are expanded upon in the Educational and Behavioral Interventions (where students apply course content in lab-based standardized patient simulations) and Drug Literature Information and Evaluation courses taught in the P1 and P2 years, respectively. These skills are further applied in the co-op/IPPE, CDM course, CDM seminar and skills labs and APPE sequences. Health Care Systems, Research Methodology and Biostatistics, Drug Literature Information and Evaluation, Jurisprudence, Pharmacy Care Management and Economic Evaluation round out the course content. These courses are designed and sequenced to optimize acquisition of student knowledge and skills. Effective in the spring of 2015, the capstone course requirement may be completed as part of the Economic Evaluation course or by completion of another designated course or directed study project, as determined by a student’s choice. (Q1, 2)

The CDM sequence integrates the foundational sciences, pharmaceutical sciences, social/behavioral/ administrative and the clinical sciences with the goal of preparing our students for the APPE year. These courses provide an opportunity to apply scientific knowledge and principles of medicinal and biochemistry, pharmacology, pharmaceutics, pharmacokinetics to the design of rational, and evidence-based therapeutic strategies, social/behavioral/administrative and clinical sciences to provide care to patients in inpatient, ambulatory, and community settings as well as communities and populations.

In summary, our curriculum is structured with basic courses leading into and integrated with more advanced courses and with application and further integration with P3 and P4 content. The three semesters of IPPE/co-op provide opportunities for students to integrate, reinforce, and advance knowledge, skills, and professional attitudes in the early professional years. The P4 year of APPEs provides more opportunities for advanced integration and application. Both IPPEs/co-ops and APPEs involve preceptor assessments of student performance relative to professional knowledge, skills, and attitudes. Important co-curricular themes of reflection, self-awareness, leadership and professionalism are cultivated through the professional portfolio (described extensively in standard 15). (Q1, 2)
Curricular content is periodically mapped to ACPE appendices and other curricular themes (see Standard 12) and then reviewed by members of the AC and CC. We have identified gaps in content (such as pharmacogenomics) and made a plan to provide this material by revising appropriate coursework (in this case, content was added to the Pharmacology sequence and in the Antiinfectives and CDM courses). Appendix B mapping from 2014 revealed gaps in training in sterile compounding and in health informatics. Both of these needs were discussed by the CC. Beginning in spring 2015, sterile products content was included in the Introduction to Pharmacy Practice laboratory and in the P3 spring semester CDM 4 Skills Lab course. We have also added health promotion material into our Educational/Behavioral Interventions course. Additional health informatics content was added to the Drug Information course starting in summer 2015. (See Appendix 13.1.1) (Q3)

Facilitated by the CC, ongoing dialog exists between chemistry and pharmaceutical sciences faculty to ensure the relevance of the pre-professional general and organic chemistry curricula. A similar dialog regularly occurs between SOP faculty and BOSS advisors and faculty from the English, biology and physics departments. The discussions occur as part of the CC’s systematic course review and through collaboration between BOSS and the respective departments and enhance the link between introductory and applied coursework. (Q3)

We also review the curriculum to assess effectiveness of topic integration. For example, we teach a combined course sequence in Pharmacology/Medicinal Chemistry. Historically, students could depend on a high pharmacology average to overshadow lack of attention to medicinal chemistry material. To drive improvement of student performance in medicinal chemistry, the design of the course was revised to include separate pass thresholds to demonstrate mastery of the pharmacology and medicinal chemistry components of the course. Similar pass thresholds have also been implemented in the CDM course (e.g., must pass 1 exam and overall course average) and laboratory sequences (e.g., must pass communication and order processing components in addition o overall course). When possible, content is also deliberately integrated in different content in the same semester (students in Research Methods examine a RCT on a topic relevant to the CDM course). Content is aligned in a vertical and progressive format in the CDM course as pharmacology material is reinforced and reassessed and exam in CDM 2 and higher include 10% content from previous CDM courses. (Q4, 5, 7)

The SOP has used ABOs for over a decade to design a curriculum that ensures graduation of practice-ready pharmacists. We have implemented a number of methods to assess these ABOs (see Standard 15). Students are introduced to programmatic outcomes upon entry into the program (1st pre-professional year for 0-6 students or P1 year for direct graduate entry track). In addition to faculty driven assessments, students routinely self-assess their level of mastery of the ABOs as a component of the professional portfolio. This highlights the importance of the ABOs to students as early as the first year of college. We are also beginning to integrate ExamSoft category mapping and strength and opportunities reports in a number of courses (Antiinfectives, CDM sequence, Skills lab, and others). The software allows instructors to map assessments to topics and program outcomes to monitor overall attainment. Other traditional measures to assess performance and mastery of knowledge and skills include performance on exams, quizzes, self and preceptor evaluation of students during the IPPE and APPE experiences. (see Standard 14) Lastly, the AC and CC monitor trends in NAPLEX and MJPE scores as a measure of curricular effectiveness. (See description in Standard 15) (Q4)

Students and alumni report being academically prepared to enter APPEs (96.2% NU, 92.3% national and 98.8% NU, 93.1 national, respectively). Further, over 90% of alumni report being well prepared for their first pharmacy job (national: 88.6%). (Q8)
The SOP has developed several strategies to further integrate, reinforce, and advance student knowledge, skills, attitudes, and values as they progress throughout the curriculum. For example, through portfolio reflections (pre-professional years 1 and 2, P1-P3), students link their science and/or social science courses and co-op/IPPE experiences to their chosen field of pharmacy. In addition, through the portfolio process, students are required to select (based on their expressed goals), attend and reflect on professional presentations during the year. The portfolio program serves to reinforce professional attitudes during meetings with advisors. In order to obtain an IPPE position, students must participate in an interview. Students have multiple times to hone their interview techniques and demonstrate professional attitudes and skills. In their Educational/Behavioral Intervention course, students build on theories from the earlier psychology course. In the CDM skills laboratory, students have the opportunity to apply their knowledge and skills in the area of physical assessment, patient education and counseling and professional communication. Additional evidence includes introduction to the concept of volunteerism in the College: An Introduction seminar and group activities to apply coursework to produce a public service announcement video and a public health project in the CDM sequence. (Q5)

Notably, the SOP has implemented several systematic quality improvement processes that drive improvement and integration of curricular content including periodic communication with departments that offer foundational coursework, systematic curricular review, and routine programmatic assessment including review of faculty, student, alumni, and preceptor surveys. These processes, coupled with in depth student exposure to practice environments in our signature co-op/IPPE program provide the depth and breath of knowledge, skills, attitudes that prepare students for early and advanced pharmacy practice experiences. (Q6)

4. College or School's Final Self-Evaluation

| Compliant | Compliant with Monitoring | Partially Compliant | Non-Compliant |

5. Recommended Monitoring

(School comments begin here)
14. Curricular Core - Pharmacy Practice Experiences

The college or school must provide a continuum of required and elective pharmacy practice experiences throughout the curriculum, from introductory to advanced, of adequate scope, intensity, and duration to support the achievement of the professional competencies presented in Standard 12. The pharmacy practice experiences must integrate, apply, reinforce, and advance the knowledge, skills, attitudes, and values developed through the other components of the curriculum. The objectives for each pharmacy practice experience and the responsibilities of the student, preceptor, and site must be defined. Student performance, nature and extent of patient and health care professional interactions, where applicable, and the attainment of desired outcomes must be documented and assessed.

In aggregate, the pharmacy practice experiences must include direct interaction with diverse patient populations in a variety of practice settings and involve collaboration with other health care professionals. Most pharmacy practice experiences must be under the supervision of qualified pharmacist preceptors licensed in the United States.

2. College or School's Self-Assessment

| The college or school provides a continuum of required and elective pharmacy practice experiences throughout the curriculum, from introductory to advanced, of adequate scope, intensity, and duration to support the achievement of the professional competencies presented in Standard 12. | Satisfactory |
| The pharmacy practice experiences integrate, apply, reinforce, and advance the knowledge, skills, attitudes, and values developed through the other components of the curriculum. | Satisfactory |
| Pharmacy practice experiences include periods for preparation and guided reflection. | Satisfactory |
| The objectives for each pharmacy practice experience and the responsibilities of the student, preceptor, and site are defined. | Satisfactory |
| Goals and outcomes for each pharmacy practice experience are mapped to activities listed in Appendix C to ensure that students’ experience will cover, at a minimum, all the listed activities. | Satisfactory |
| Student performance, nature and extent of patient and health care professional interactions, where applicable, and the attainment of desired outcomes are documented and assessed. | Satisfactory |
| In aggregate, the pharmacy practice experiences include direct interaction with diverse patient populations in a variety of practice settings and involve collaboration with other health care professionals. | Satisfactory |
| Most pharmacy practice experiences are under the supervision of qualified pharmacist preceptors licensed in the United States. | Satisfactory |
| The college or school ensures that all preceptors (especially first-time preceptors prior to assuming their responsibilities) receive orientation regarding the outcomes expected of students and the pedagogical methods that enhance learning, ongoing training, and development. | Satisfactory |
A quality assurance procedure is in place that facilitates standardization and consistency of experiences and outcomes while allowing for individualization of instruction, guidance, and remediation by the preceptor based on student needs. | Satisfactory
---|---
Students do not receive remuneration for any pharmacy practice experiences (introductory or advanced) for which academic credit is assigned. | Satisfactory
The introductory pharmacy practice experiences involve actual practice experiences in community and institutional settings and permit students, under appropriate supervision and as permitted by practice regulations, to assume direct patient care responsibilities. | Satisfactory
Introductory pharmacy practice experiences account for not less than 300 hours over the first three professional years. The majority of students' time (minimum 150 hours) is balanced between community pharmacy and institutional health system settings. | Satisfactory
The length of the advanced pharmacy practice experiences is not less than 1440 hours (36 weeks) during the last academic year and after all pre-advanced pharmacy practice experience requirements (i.e., introductory pharmacy practice experiences and required core didactic course work) are completed. | Satisfactory
All required advanced pharmacy practice experiences in all program pathways are conducted in the United States or its territories and possessions (including the District of Columbia, Guam, Puerto Rico, and U.S. Virgin Islands). | Satisfactory
Required experiences include primary, acute, chronic, and preventive care among patients of all ages and develop pharmacist-delivered patient care competencies in the following settings:
- community pharmacy
- hospital or health-system pharmacy
- ambulatory care
- inpatient/acute care general medicine
Simulation is used appropriately as a component of introductory pharmacy practice experiences; it does not account for greater than 20% of total introductory pharmacy practice experience time and does not substitute for the hours devoted to actual experiences in community pharmacy and institutional health system settings. | N/A

3. College or School's Comments on the Standard

<table>
<thead>
<tr>
<th>Focused Questions</th>
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☑ How student performance is assessed and documented, including the nature and extent of patient and health care professional interactions, and the attainment of desired outcomes
☑ How, in aggregate, the practice experiences assure that students have direct interactions with diverse patient populations in a variety of health care settings
☑ How the college or school ensures that the majority of students' IPPE hours are provided in and balanced between community pharmacy and institutional health system settings
☑ How the college or school uses simulation in the curriculum
☑ How the college or school establishes objectives and criteria to distinguish introductory from advanced practice experiences.
How the college or schools assures, measures, and maintains the quality of site used for practice experiences
- How quality improvements are made based on assessment data from practice sites
- How the goals and outcomes for each pharmacy practice experience are mapped to the activities listed in Appendix C of Standards 2007 to ensure that students' experience will cover, at a minimum, all the listed activities
- How the college or school is applying the guidelines for this standard, and the additional guidance provided in Appendix C, in order to comply with the intent and expectation of the standard
- Any other notable achievements, innovations or quality improvements
- Interpretation of the data from the applicable AACP standardized survey questions, especially notable differences from national or peer group norms

(School comments begin here)

Goals and objectives for introductory pharmacy practice experiences (IPPEs) have been developed regionally with the New England Regional Departments of Experiential Education (NERDEE). Each required IPPE has specific learning objectives that are assessed by preceptor's and student self-assessments. The SOP uses Northeastern University's Co-operative Education (Co-op) program, its learning model (Appendix 14.5.1) and the 3 SH Introduction to Pharmacy Practice (IPP) course with lab to meet the IPPE requirement. Simulation with standardized patient interactions is used in the labs associated with the IPP, Educational and Behavioral Interventions in Pharmacy Practice, and CDM courses in addition to co-op (IPPE) experience. This simulation does not count towards overall IPPE hour requirement. The co-op program is managed by 2 co-op faculty coordinators who are practicing pharmacists with over 30 years combined experience supervising the program. SOP policies require each student complete 1 co-op cycle (4-months, 640 hours) in the community setting and 1 cycle in an institutional setting (640 hours). Placements are reviewed annually to ensure students are in compliance with the policy and plans are underway for NU Degree Audit Reporting System to automate this review. (Q1,3,4)

Co-op allows students to achieve specific competencies in both practice settings (Appendix 14.1.1). Students are enrolled in, and receive non-academic credit for, these required experiences and are remunerated by the sites in the long-standing tradition of co-op at NU. A waiver has been obtained from ACPE regarding remuneration (Appendix 14.5.2). Students can earn as many as 1200 of the state-required intern hours through the IPPE portion of the curriculum. Student performance is documented and assessed by student self-assessment of their pharmacy practice experience and by preceptor documentation. During IPPEs, students are able to compare their self-assessment to the assessment from their preceptor. Co-op faculty coordinators review each IPPE assessment with the student during debrief sessions to be sure desired outcomes are attained. (Q1)

The IPPE plays an important role in preparing pharmacy students for their APPEs. 93.1% of graduating students in the class of 2014 agreed that IPPEs were valuable in helping them prepare for their APPEs (11 points over national/peer data) (Q11). Working early and directly with patients and practitioners in typical pharmacy practice settings builds patient care and interpersonal skills, and increases student confidence. Through these experiences, students begin APPEs with relatively high levels of independence and maturity. Each IPPE in pharmacy is delivered according to the Co-op Learning Model, which includes preparation, activity, and reflection. The learning model assists a student in the development of both personal and career goals. Subsequent didactic studies not only build on these IPPEs, but also help students better refine their personal and career goals as documented in the
Students prepare for IPPEs by taking the 3 SH IPP course with lab and meet with their Co-op/IPPE faculty several times. The IPP course was revised in the 2012 curriculum revision to provide a stronger foundation in communication and drug information skills. In this course, students gain job acquisition skills and an introduction to the realities of the health care environment. Students prepare resumes, develop interviewing skills, and construct strategies to solve challenges commonly encountered during employment. A clear definition of student and employer expectations is discussed. This course also provides students with basic, technical IPPE skills. Students are introduced to pharmacy calculations, drug information resources, Massachusetts’ pharmacy laws, brand/generic names of the top 100 drugs, and sterile product preparation. Successful completion of this course prepares students for the pharmacy workplace. In the supplemental portion of the preceptor survey, 96% of respondents agreed the students are adequately prepared for co-op. Students are not placed in their sites, but interview for their jobs. This creates a real world job search experience and enhances learning. As such, students receive notification of their IPPE based on their timeliness to respond to job offers. In the event of multiple job offers, the Co-op faculty assists the student in the final selection. Students without an offer are guided toward opportunities to interview with other employers. (Q1)

The goals and objectives for the first IPPE recognize that students are novices in the health care environment. Students have opportunities to identify and reflect on their strengths and weaknesses relative to their newly assigned roles. This self-assessment is intended to help students develop strategies for professional success. Students then apply their pharmacy knowledge and practice their newly acquired pharmacy skills in relation to specific IPPE competencies depending on the practice environment (i.e., community, institutional or elective). (Q1, 5)

Students receive an evaluation from their Co-op/IPPE employer upon completion of each IPPE; they also complete an on-line self-assessment 3 times for each experience. Co-op/IPPE faculty use these instruments to monitor students’ job performance, professional behaviors, and successful completion of IPPE competencies. Co-op faculty also meet with each student individually prior to their second IPPE and, based on the assessment of the first IPPE, assist students in creating new goals and strategies for personal and professional development. This learning model and cycle are repeated for subsequent Co-op/IPPE experiences. (Q1)

Preceptors and employers are provided with a Co-op/IPPE Handbook (see Appendix) that outlines the program, its requirements, and expectations of students and employers. The Handbook also offers suggestions as to how to interact and develop young professionals. A course syllabus for each required IPPE defines expectations for the student and preceptor (Appendices 14.1.1-3). Preceptors receive individual training on the program requirements via phone and in-person visits. Preceptors who identify that their experience exceeds the co-op (IPPE) requirements, are referred to the APPE program for consideration. (Q5)

The APPE program consists of six, 6-week rotations. Four required APPEs in community, internal medicine, health system, and ambulatory care and two elective APPEs fulfill the 36 weeks (or 1440 hours) in the P4 year. Students may select from 28 different types of patient care and non-patient care rotations to satisfy programmatic requirements. Each type of rotation may have multiple sites and preceptors, offering the opportunity for students to personalize their experiential year in order to be professional portfolio (standard 15). The Co-op faculty maintain approximately 120 sites locally and nationwide that collectively provide approximately 145 jobs. These IPPEs offer one-to-one student to preceptor relationships. (Q1,2)
competitive in their search for a position following graduation. 95.9% of students graduating in 2014 (5% above national/peer data) agreed that the variety of available APPEs met their needs as a student. (Q9,11)

Based on programmatic feedback, the APPE assessment of student performance was changed in May 2011. The new APPE competencies are focused on 9 content areas within 5 targeted outcomes sections (Knowledge Application, Professionalism, Communication, Patient Care and Practice & Systems Management). In addition to showing competency in these 9 areas, students must have actively participated in patient care, undertaken projects relevant to the experience, maintain a goal-driven reflective portfolio, and adhere to professional standards of conduct. (Q7)

The APPE preparatory seminar I & II, administered by the OEE during the P3 year, introduces and orients students to the expectations and competencies of the P4 year. Students submit preferences and are matched with preceptor availability. All aspects of APPE placements and assessment are managed using E*Value software. Students in the class of 2015 had 96.9% of the total 786 APPE rotations match with their first, second or third choice. Forty percent of the total APPE rotations are delivered by NU faculty preceptors. APPE schedules are released to students in March of each year. During “APPE Bootcamp” (the last class of APPE prep II) APPE Syllabi (Appendix 14.1.4) is reviewed to ensure students are able to identify competencies and activities for the required APPEs. Preceptors are provided an abbreviated version of the student syllabus that contains the competency assessment form, the site/preceptor evaluation forms, the students’ APPE portfolio requirements, and expectations for midpoint and final evaluations. Responsibilities of the site/preceptor are also defined in the standard affiliation agreement. (Q9, 10)

Student performance is documented in E*Value by both the preceptor and the student via the student assessment of performance tool and student self-assessment document, respectively. Students are required to maintain a self-reflective portfolio throughout the APPE year. During each APPE, students self-assess achievement of their competencies and complete two structured reflections on at least two ABOs during each APPE. (Q1)

Patient interactions are documented, in part, in the E*Value system using the PxDx patient intervention form. Students are also able to rate the level of interaction with patients on the student assessment of the site/preceptor evaluations forms. 98.6% of students in the class of 2014 agreed that their APPEs allowed them to interact with diverse patient populations. (Q2,11)

All required IPPE and APPE experiences take place in the U.S. Nearly 100% (99.7%) of APPEs are conducted by licensed pharmacists; 0.3% are delivered by non-pharmacists (including MDs, PhDs, MBAs); these APPEs are elective. Student to adjunct preceptor ratio is 1:1 for the majority of APPEs while the student to faculty preceptor ratio is typically 3:1. The OEE makes every effort to visit new sites and provide an orientation to the program. In cases where the site is outside the school’s region, orientation and requirements are discussed via conference call. Locally, where NU has an extensive, long-standing relationship with a site (e.g., Brigham and Women’s Hospital), the site’s clinical coordinator works with the OEE to assure that new preceptors receive the necessary information. We are fortunate to continue to have alumni returning to the program as preceptors. From 2008 to present, 61 alumni returned to precept students in an adjunct capacity in a variety of practice settings. These preceptor/alumni know the program from the student perspective, giving them a unique understanding of students’ needs and program requirements. (Q9,10)
Quality improvement continues to be a work in progress for our program. Currently we review the student assessment of the preceptor and site to identify sites/preceptors that require intervention. Preceptor identification of a student issue also prompts a site visit. In the 2014-2015 year the OEE plans to visit all sites to address concerns identified on the AACP preceptor survey. As only a small subset (10%) of the entire preceptor population responded to the survey, the goal of each site visit is to obtain and deliver key information about the expectations and processes of the APPE program such as clear instructions for preceptors about how to view student evaluations about their rotations. Additionally, the visit will provide a ‘how to’ guide to access available online preceptor development programming. Lastly, each site will be asked to provide their frequency preferences for contact with the OEE. (Q6)

Recent quality improvement measures include: a revised IPPE competency document (in collaboration with the northeast regional consortium), revised APPE student final evaluation tool, comprehensive site visitation (including materials for sites/preceptors to invite more frequent visitation) and updating required rotation descriptions. These improvements have allowed us to maintain a high quality program based on the ACPE and program requirements. Graduating students from 2014 agreed that sites available for APPE were of high quality (NU 96.6%, peer/national 92.2%). (Q7, 11)

A comprehensive review of the Appendix C and pharmacy practice experiences was conducted by the OEE and Curriculum Committee based on mapping that compared rotation activities to those in the Appendix. When needed, supplemental didactic course work has been added to ensure all listed activities are covered. (Q8, 9)

Our APPE program is most fortunate to be a 2-time winner of the AACP Crystal APPLE award, and to work with Dr. Paul Szumita, an alumnus preceptor honored with an inaugural Master Preceptor Award. (Q10)

Of the 27 AACP survey questions related to Standard 14, 18 questions meet or exceed (by as much as 10 percentage points) agreement with the peer/national scores. The remaining questions were examined closely. From the 2014 graduating student survey, 8 more students (compared to 2013 results) or ~5% of the graduating class disagreed that the process by which they were assigned to IPPE sites was fair. The OEE had already received feedback on and investigated this concern. Annually, there is a minority of students who have not completed their IPPE requirement. Therefore, to ensure that this cohort receives an opportunity to complete requirement, their resumes are sent out to prospective employers before resumes from students who have already completed requirements. A student who has completed their requirement may view this process as unfair, but it has improved the OEE’s ability to ensure compliance with ACPE and programmatic requirement. (Q11)

An additional student concern is access to patients in the ambulatory care environment. Some sites experience ‘no show appointments’ despite the best attempts by preceptors, and some students have provided feedback on preceptor/site evaluations about this situation. As a result, we discuss this uncontrollable aspect of the patient care environment prior to APPEs. (Q11)

Several questions (n=5) show that our program has seen a decline in the number of preceptors who agree with a certain question (Qs 21, 23, 24, 36, 38). However, upon careful examination, the change was a result of just 1 or 2 preceptors selecting disagree or unable to comment. This underscores our need to increase the number of respondents to be sure the results reflect important trends rather than small variations as a result of low response rate. (Q11)
4. College or School's Final Self-Evaluation

- Compliant
- Compliant with Monitoring
- Partially Compliant
- Non-Compliant

5. Recommended Monitoring

(School comments begin here)
15. Assessment and Evaluation of Student Learning and Curricular Effectiveness

As a component of its evaluation plan, the college or school must develop and carry out assessment activities to collect information about the attainment of desired student learning outcomes. The assessment activities must employ a variety of valid and reliable measures systematically and sequentially throughout the professional degree program. The college or school must use the analysis of assessment measures to improve student learning and the achievement of the professional competencies.

The college or school must systematically and sequentially evaluate its curricular structure, content, organization, and outcomes. The college or school must use the analysis of outcome measures for continuous improvement of the curriculum and its delivery.

2. College or School's Self-Assessment

| The college or school develops and carries out assessment activities to collect information about the attainment of desired student learning outcomes. The assessment activities employ a variety of valid and reliable measures systematically and sequentially throughout the professional degree program. | Satisfactory |
| The college or school's evaluation of student learning determines student achievement at defined levels of the professional competencies, in aggregate and at the individual student level | Satisfactory |
| The college or school uses the analysis of assessment measures to improve student learning and the achievement of the professional competencies. | Satisfactory |
| The college or school systematically and sequentially evaluates its curricular structure, content, organization, pedagogy, and outcomes. | Satisfactory |
| The college or school uses the analysis of outcome measures for continuous improvement of the curriculum and its delivery. | Satisfactory |
| The college or school has developed a system to evaluate curricular effectiveness. | Satisfactory |
| The college or school ensures the credibility of the degrees it awards and the integrity of student work. | Satisfactory |
| The college or school has mechanisms to assess and correct underlying causes of ineffective learning experiences. | Satisfactory |
| The college or school's assessments include measurement of perceived stress in faculty, staff, and students, and evaluate the potential for a negative impact on programmatic outcomes and morale. | Satisfactory |

3. College or School's Comments on the Standard

Focused Questions

☑️ A description of formative and summative assessments and measures used to evaluate teaching and learning methods and curricular effectiveness, including nontraditional pathway(s) leading to the Doctor of Pharmacy degree (if applicable)
A description of the assessment measures and methods used to evaluate student learning and, achievement at
defined levels of the professional competencies and educational outcomes, both in aggregate and at the individual
student level

How achievement of required competencies by all students is assessed and assured on completion of the
program

Comparisons with national data and selected peer-group programs (include a description of the basis for the peer-group selection) and trends over time

How feedback from the assessments is used to improve student learning, outcomes, and curricular
effectiveness

The mechanisms in place to assess and correct causes of ineffective learning experiences, including the measurement of perceived stress in faculty, staff, and students and evaluation of the potential for a negative impact on programmatic outcomes and morale

How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard

Any other notable achievements, innovations or quality improvements

Interpretation of the data from the applicable AACP standardized survey questions, especially notable differences from national or peer group norms

(School comments begin here)
The school systematically evaluates curricular outcomes, structure, content, and organization. The Curriculum Committee (CC) works in unison with the Assessment Committee (AC) to collect and analyze data to document attainment of learning outcomes. Each committee has representation from key stakeholders: faculty, students, administrators, student services and alumni. Both committees receive charges from the Dean based on the SOP strategic plan, meet on a regular basis throughout the year, and collaborate frequently. Each committee has representation on the other via the Directors of Undergraduate and Professional Programs and Assessment, two new administrative positions created since the last site visit. The Director of Undergraduate and Professional Programs works closely with the CC, oversees the Professional Portfolio, and works as a liaison with Bouve and University Curriculum Committees. The Director of Assessment oversees programmatic assessment and assessment of educational outcomes, provides faculty development, and works closely with the Assessment and Curriculum Committees and the Office of Experiential Education. (Q2,8)

Since 2009, the AC routinely reviews data collected via our school-specific graduating student exit survey, as well as AACP/ACPE surveys, student services satisfaction surveys, performance on NAPLEX and MPJE, student progression and attrition statistics, and learning outcomes assessment data collected by faculty and student self-assessments. This information is analyzed and recommendations are presented to the appropriate committees and administrators. A positive trend has been observed with respect to preceptors’ awareness of mechanisms to provide curricular feedback to the SOP (agreement increased from 68% in 2009 to 78% in 2014). Our student, faculty, alumni and preceptor AACP response rates have always exceeded that of national and peer cohorts, indicating commitment of all stakeholder groups to our quality improvement process (FQ2,9).

Faculty development to improve assessment practices and to foster a culture of assessment has been ongoing. Recently, specific topics included: mapping of exam questions to course and programmatic
outcomes and the use of exam analytics to identify learning gaps or areas of strength. We have also begun publishing an annual Curriculum & Assessment Newsletter that is shared with all students and faculty to highlight best assessment practices and curricular initiatives. Our efforts to increase faculty expertise in evidence-based assessment strategies have been reflected in the AACP faculty survey with a 10% increase in faculty agreement that the school effectively uses programmatic assessment data to improve the curriculum (lowest 71% in agreement in 2010 vs. 83% in 2014) with a notable change in those who chose “unable to comment” for this question (decrease from 24% in 2009 to only 4% in 2014) (Q1,2,9).

The foundation of any assessment program is the definition of and continuous attention to programmatic outcomes. Our SOP’s ABOs (standard 12) represent the minimal expectations for graduates of the professional program in pursuit of the mission of the school, college and university. Curriculum mapping to determine the degree to which all ABOs are covered by our course content and practice experiences has revealed an appropriate curricular breadth and depth of coverage (Standard 12). Likewise, mapping of Appendix B demonstrates richness in the scope of our curriculum. Our mapping and gap analyses continue to inform us of strengths and areas for improvement and have helped to develop an agenda for the CC and AC moving forward. We have identified the following areas of need for further analysis: Pharmacognosy and Alternative and Complementary Treatments, some aspects of practice management, pharmacy law and regulatory affairs, informatics, and aspects of leadership. There is also continued development of activities that focus on interprofessional competencies (Q2,5).

The SOP’s Assessment Plan accurately describes our approach to comprehensive formative and summative curriculum evaluation. The plan (Appendix 15.8.1) was developed in 2008 and revised in 2014. The revised plan includes a comprehensive approach to assessment, detailing when assessment data are collected, who receives data and how results are used and communicated, as well as where to find results. The plan is organized by our programmatic and curricular assessments and for each measure we have identified benchmarks to self-assess achievement (Q1,2).

The SOP’s Assessment Blueprint (Appendix 15.8.2) has allowed us to consider the nature of assessments in our program. This blueprint extracts data from course syllabi, which indicate assessment methods for all outcomes and reflect the breadth of formative and summative assessments performed. Most commonly, formative assessments include: in class exercises (use of clickers, clinical patient cases, think pair share strategies etc.), homework, drafts, performance based assessments in our skills labs, and mid-point IPPE/APPE feedback. Summative assessments include quizzes, exams, presentations, and performance based-assessments in laboratories and during experiential learning. Most of our performance based assessments (both in didactic/laboratory and experiential settings), papers, and presentations are evaluated by rubrics, which are developed, tested and revised by groups of faculty in an attempt to establish validity and internal reliability. During IPPEs and APPEs, students are evaluated by preceptors using standardized performance evaluation rubrics that have been mapped to programmatic outcomes and Appendix C. Also, students are routinely asked to self-assess in experiential activities (IPPE and APPE reflections) and co-curricular requirements (portfolio reflections and student self assessment of ABO achievement). (Q1).

A plan to document achievement of educational programmatic outcomes (Appendix 15.8.3) has been developed to ensure all students attain our ABOs prior to graduation. In addition to attaining a passing grade, evaluation of competency achievement has been encouraged in each course. Templates were developed to help faculty evaluate student achievement at the lecture level and the course level (see examples Appendix 15.8.4-5) Some faculty also ensure outcome achievement by creating a course...
grade structure that requires achieving adequate competency in a specific area. For example, in the Pharmacology/Medicinal Chemistry courses, student must attain a passing score on both pharmacology and medicinal chemistry material to pass the course. This change was implemented as the result of assessment data that showed that many students were able to pass the course without achieving the competency in medicinal chemistry material. Another example of this is the CDM skills laboratory courses, where students must now pass the communication and order filling competencies, independent of the overall course score, to successfully complete the course (Q3, 5).

We had been challenged with manual data aggregation across courses until the 2014 adoption of ExamSoft software. We anticipate that ExamSoft will provide a more feasible system for faculty to gather and evaluate student achievement of outcomes on individual and aggregate level in one lecture, one course, or across many courses (Appendix 15.8.6). The implementation of ExamSoft has provided further opportunities for faculty development on assessment practices. Particular emphasis has been placed on using immediate assessment data to evaluate student learning gaps and adjust instruction or provide remediation. The software can also create student specific performance reports that highlight their strengths and learning gaps and allows for self-directed remediation. The AC will play an important role in continued faculty development and quality assurance of mapping (Q3, 5, 8).

While some programs institute milestone or progress exams to evaluate outcome achievement, we have adopted an embedded assessment model in a number of our courses. Throughout the 24SH CDM series that integrates foundational pharmaceutical sciences content with clinical sciences, each exam includes a 15-20% content derived from previous coursework. With the powerful analytics available in ExamSoft, course faculty identify learning gaps, discuss these with the students during exam review sessions, provide suggestions and resources for further study, and then reassess on future exams. Additionally, the CDM skills laboratory series comprehensively evaluates knowledge, skills, and attitudes covered in a number of other courses, such as the CDM series, Drug Literature Evaluation, Research Methodology, and Educational and Behavioral Interventions in Pharmacy Practice courses. As we begin to implement Standards 2016, we will also be participating in the Pharmacy Curriculum Outcomes Assessment (PCOA), which will provide additional benchmark data on the curriculum (Q1, 3).

The CC utilizes a comprehensive formative systematic curricular review process to identify, integrate and document assessment activities and resultant curricular changes as discussed in detail in Standard 10. The process is sensitive to advances in clinical and educational practices and is designed to focus on global curricular issues. The review process is aligned with the school’s assessment policies and assists in the ongoing documentation of ABO achievement and ACPE standards. During the review, the CC members consider whether assessment methods are appropriate and how the instructor links assessment with course objectives and documentation of student achievement of ABOs (Q1-3).

The School has used the Progressive, Reflective, Career Development Student Portfolio since early 2000’s to meet multiple objectives: career and professional development, student-faculty engagement, and student documentation of progress in achievement of learning outcomes. Each student is matched with a faculty advisor/mentor based on a survey of the student’s interests in various pharmacy practice and research settings using the career options profiles from the American Pharmacists Association (APhA) (Q3).

In the portfolio, students reflect on their career aspirations as well as recent activities /events to provide insight to healthcare and the profession of pharmacy. Each year of the portfolio is tailored to aspects of student development and their place in the curriculum. In each semester students are required to reflect
and document their progress to achievement of programmatic ABOs. From the breath of curricular, experiential and co-curricular aspects of their education, students write a brief explanation of how the ABO was achieved and provide one or more artifacts as evidence of outcome achievement (examples of artifacts can be course papers, photos of work/activities, exam scores, etc.) Reflections are structured using a “reflection on action” model and can help students modify and refine their professional goals. Faculty advisors meet with students annually to review the portfolio and provide feedback. (Q1-3).

Internal student and faculty survey data have identified areas for improvement in the portfolio process. An ad-hoc portfolio revision taskforce had been meeting regularly to work on revisions and in 2014-15 a new Student Professional Development committee was proposed (see charges and members in Appendix 15.8.7). The revised portfolio consists of four main pillars: Career development; Documentation of professional competencies/ABOs; Personalized Education plans/Differentiated Learning; and Professionalism (See Appendix 15.8.8). Student self-reflection and promotion of self-directed learning continue to be emphasized. In addition, NU has recently obtained a site license with an e-portfolio platform (Digication®), and the SOP portfolio transitioned to this platform in spring 2015 (Q5).

A number of systems are in place to ensure integrity of student work and credibility of student degrees. A faculty guidance document is available that suggests strategies to limit academic misconduct (Appendix 15.8.9). The majority of courses use assigned seating charts for exams, multiple versions on paper exams, or randomized question delivery in electronic testing platforms (Blackboard or ExamSoft). Whenever possible, additional space is obtained and multiple, trained proctors are available. Students leave all belongings at the room perimeter. Class photo rosters are available for all courses through the Blackboard learning management system. The Degree Audit Reporting System is an automated process monitored by BOSS advisors to ensure that each student completes all didactic, laboratory, and IPPE and APPE experiences required for degree completion (Q7).

In the 2012 curricular revision, the CC compared our curriculum to our peer and aspiration match mates to ensure our curriculum sufficiently prepares contemporary, practice-ready pharmacists. Our NAPLEX 2014 pass rates are near, but slightly below the national average and historically low, prompting discussion by the CC and Executive Committee on strategies to improve student preparation. MPJE pass rates are slightly below national averages, highlighting the need for an evaluation of our Pharmacy Law course, as well as how law is applied during APPEs (Q4).

Systems are also in place to prevent, monitor and quickly correct causes of ineffective learning experiences. The Director of Undergraduate and Professional Programs works with faculty and has created a SOP Exam Calendar to identify periods of stress and decompress such time periods before the semester begins. Annual curriculum mixers promote communication among faculty teaching in courses that integrate and build upon each other. Mid-semester feedback described previously in Standard 3 facilitates timely feedback between students and faculty that allows for immediate response. Faculty have the opportunity to communicate with each other and with Department Chairs and the Dean regarding stress associated with teaching responsibilities and student behaviors. When issues arise, school administration works with the faculty to provide TA or administrative support and quickly address students’ unprofessional behaviors. Additionally, the BOSS and school administrators have an open door policy to quickly respond to student feedback. (Q6)
4. College or School's Final Self-Evaluation

☐ Compliant  ☐ Compliant with Monitoring  ☐ Partially Compliant  ☐ Non-Compliant

5. Recommended Monitoring

(School comments begin here)
## 16. Organization of Student Services

The college or school must have an organizational element(s) devoted to student services. The administrative officer responsible for this organizational element must oversee and coordinate the student services of the college or school.

### 2. College or School's Self-Assessment

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<tr>
<th>Statement</th>
<th>Rating</th>
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<tbody>
<tr>
<td>The college or school has an organizational element(s) devoted to student services.</td>
<td>Satisfactory</td>
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<tr>
<td>The organizational element(s) devoted to student services has an administrative officer responsible for overseeing and coordinating them.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The budget assigned to student services is sufficient to provide needed services.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The college or school has an ordered, accurate, and secure system of student records which are confidential and maintained in compliance with the Family Educational Rights and Privacy Act (FERPA).</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Student services personnel are knowledgeable regarding FERPA law and its requirements.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The college or school provides students with financial aid information and guidance, academic advising, career-pathway and other personal counseling, and information about post-graduate education and training opportunities, e.g., residencies, fellowships, and graduate school.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The college or school offers access to adequate health and counseling services for students. Appropriate immunization standards exist, along with the means to ensure that such standards are satisfied.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The college or school has policies in place so that students who have off-campus classes or pharmacy practice experiences fully understand their insurance coverage and where and how to access health and counseling services.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The college or school has a policy on student services, including admissions and progression, that ensures nondiscrimination as defined by state and federal laws and regulations, such as on the basis of race, religion, gender, lifestyle, sexual orientation, national origin, or disability.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The college or school ensures that students in all degree program pathways and geographic locations have equal access to and a comparable system of individualized student services (e.g., tutorial support, faculty advising, counseling).</td>
<td>Satisfactory</td>
</tr>
</tbody>
</table>

### 3. College or School's Comments on the Standard

**Focused Questions**

- ☑ A description of student services offered and, if applicable, how the college or school ensures that students in all degree program pathways and geographic locations have equal access to and a comparable system of individualized student services (e.g., tutorial support, faculty advising, counseling)

- ☑ A description of the sections of the student handbook that deal with specific requirements of the standard and guidelines
How the college or school provides students with financial aid information and guidance, academic advising, career-pathway and other personal counseling, and information about post-graduate education and training opportunities

How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard

Any other notable achievements, innovations or quality improvements

Interpretation of the data from the applicable AACP standardized survey questions, especially notable differences from national or peer group norms

(School comments begin here)

The BCHS Office of Student Services (BOSS) and SOP Assistant Dean for Academic Affairs are responsible for the provision of student services. The administrative officer of the BOSS, Assistant Dean of Student Services and Enrollment Management, reports directly to the BCHS Dean. Two professionals at BOSS are currently assigned to students enrolled in the pre-pharmacy through P3 years and the Assistant Dean works collaboratively to assist all students in the SOP program. Support at the college level enhances service, addresses students’ developmental needs, invites students to participate in institutional decision-making, enables a strong and compassionate crisis response, and promotes a lifelong affinity with the University and alumni engagement. (Q1)

Upon successful completion of the P3 year, students receive a BS in Pharmacy Studies before continuation. During the P4 year, oversight of student services is delegated to the Assistant Dean for Academic Affairs and the SOP Office of Experiential Education (OEE) for primary student services with the Bouvé Office of Graduate Student Services ensuring administrative adherence to University requirements. (Q1,4)

Since 2009, both the BOSS and the OEE have increased FTE lines with the intent of achieving overall improvements within each respective office. The AACP student surveys demonstrate high overall student satisfaction regarding student advising, tutoring services, career planning and guidance, and making information available about post-graduate education and training. Based on these same surveys, there is also improving satisfaction with financial aid advising and health/wellness services. (Q1,5,6)

Student records are available to BOSS staff, each of whom has received formal compliance training regarding policies and procedures relevant to the Family Educational Rights and Privacy Act (FERPA). All electronic student records are kept confidential and secure through password protection and secure socket encryption technology. (Q4)

All SOP students have a professional academic advisor from their PrePh-1 year through graduation with a BS in Pharmacy Studies at the completion of the P3 year. While academic advising during these years is the primary responsibility of the OSS, there is also a collaborative process between the OSS and the SOP. SOP faculty members involved in both undergraduate and graduate education are assigned approximately 3-4 students from each PharmD class year to provide portfolio advising (Standard 15). This faculty interface allows the possibility of additional mentoring regarding career counseling and program planning as needed. (Q1,4)

Students who matriculated into the PharmD curriculum through the post-baccalaurate direct entry program are assigned their own dedicated primary advisor who works in consultation with the SOP Assistant Dean for Academic Affairs. (Q1,4)

Northeastern University / Bouve College of Health Sciences, School of Pharma
Undergraduate advisors, in collaboration with the SOP Assistant Dean for Academic Affairs, regularly assist at-risk students (i.e., those who have a low grade-point average, past course deficiencies, and/or self-identified as at-risk). Students returning from a Leave of Absence (LOA) can also be considered at-risk. In addition to the BOSS advisors, undergraduate student athletes have a second advisor to assist with academic issues that may arise and have additional mandatory reporting as part of the National Collegiate Athletic Association (NCAA) student athlete retention policy. (Q1,4)

Both undergraduate and graduate advisors participate in a grade review at the end of each semester and contact students who did not complete program requirements to create a plan for success. The plan may include the use of tutoring, the Disability Resource Center (DRC), University Health and Counseling Services, Career Services, etc. Academic probation and dismissal from the major are also addressed at this time. The plan for success will vary depending on the student’s needs. In addition, faculty and staff use the web-based Faculty and Advisor Communication Tool (FACT) to proactively identify students who may need counseling related to academic and other matters. (Q1,4)

Support services for PharmD students, including directed tutoring offered in consultation with coordinators of core courses in the professional curriculum, are coordinated through the SOP Office of the Assistant Dean for Academic Affairs (See Standard 19). (Q4)

Student recruitment occurs in two phases: pre- and post-applicant decisions. Prior to application submissions, recruitment is the primary responsibility of the University’s admissions staff through domestic and international outreach activities including college fairs, open houses, distribution of marketing materials, and the use of Internet resources (web page resources and social media). In addition, the BCHS, in collaboration with the University’s Admissions Office and the SOP, participate in on-campus open houses. Early Action Admitted Days and many other programs that introduce our prospective and admitted students to the University, OSS, and the SOP. These events, which take place throughout the year, also provide the opportunity for SOP faculty to directly interface with our prospective and admitted students.

There are several entry points for students aspiring to enter the PharmD program: entry as pre-pharmacy students, internal transfers/changes of major, external transfers into the PrePh-1 or PrePh-2 year, and external direct admissions into the P1 year. The undergraduate admissions office manages the process for the students applying for fall entry into the PrePh-1 year and external transfers into the PrePh-1 and PrePh-2 years. The SOP works with BOSS to facilitate processes for internal transfers/changes of major. The SOP oversees the admissions and interview processes for all students gaining entry into the P1 year, be they PrePh-2 students, internal transfers, external transfer to the PrePh-1 or PrePh-2 year, and external direct-entry students to the P1 year (See Standard 17). Information available to prospective students can be found on the Admissions website (http://www.northeastern.edu/admissions) and the SOP Admissions page (http://www.northeastern.edu/bouve/pharmacy/programs/pharmd). (Q4)

Enrolled students meet with their academic advisor during student orientation and throughout the curriculum for individual advising sessions to ensure the academic performance aligns with program requirements. (Q1)

The BCHS First-Year Experience Program supports all first-year BCHS students – including PrePh-1 students – and is offered by the BOSS. A first-year seminar class is required for all Bouv&eaute; freshmen. The instructors for PrePh-1 student sections are SOP faculty, and many of the sections are also co-taught with upper-level pharmacy students designated as Bouv&eaute; Fellows and/or a
pharmacy academic advisor. Content areas discussed include time management, diversity, introductory review of the pharmacy profession, and becoming familiar with the local communities. The Bouvé Fellows also serve as peer mentors. (Q4)

Upon matriculation into the P1 year, the SOP Office of the Assistant Dean for Academic Affairs coordinates a focused orientation meeting to update students early in the fall semester. Students who are enrolled through the direct entry program are also included in this orientation. (Q4)

Prospective students are provided with extensive financial aid resource information at information and orientation sessions. The University’s Office of Student Financial Services (OSFS) administers scholarships, awards (achievement and need-based), and loans. Financial aid information and guidelines for both students and parents may be assessed at http://www.northeastern.edu/financialaid.

At the local level, the SOP has a scholarship and awards program administered by a committee. Scholarship awards are provided by a number of sponsors, including pharmaceutical manufacturers, chain and independent pharmacies, and professional pharmacy organizations, as well as through endowed accounts that have been established by benefactors who wish to provide a sustained award. During the 2013-14 academic year, a total of $85,900 was awarded to students by the Scholarship and Awards Committee. (Q1,5)

Students at the SOP have access to the Northeastern University Student Health Plan, which provides comprehensive care through University Health and Counseling Services (UHCS) and is administered by Blue Cross Blue Shield (BCBS) of Massachusetts. Details may be accessed at http://www.northeastern.edu/nushp. Students are encouraged to use UHCS when they are on campus for first-line care or acute injury, but they also have access to the BCBS preferred provider network for routine care off-campus and to national/international emergency services. In accordance with Massachusetts state law (105 CMR 220.000: Immunization of Students Before Admission to School), students enrolled full-time or three-quarters time in a degree program must obtain health insurance. Students are automatically enrolled in a university-administered health insurance program; however, individual students may waive university health insurance if they certify that they have insurance through another provider. (Q1,4)

In accordance with University policy, the SOP is committed to providing its faculty and students equal opportunity and eliminating discrimination in the academic setting. The University policy on equal opportunity is available to students and faculty for review in the University offices and electronically on the Office of Institutional Diversity and Inclusion website (http://www.northeastern.edu/oidi). The website describes rights responsibilities, and a procedure for grievance relating to discrimination (Q2)

4. College or School's Final Self-Evaluation

| ☑ Compliant | ☐ Compliant with Monitoring | ☐ Partially Compliant | ☐ Non-Compliant |

5. Recommended Monitoring

(School comments begin here)

Northeastern University / Bouve College of Health Sciences, School of Pharma
17. Admission Criteria, Policies, and Procedures

The college or school must produce and make available to students and prospective students criteria, policies, and procedures for admission to the professional degree program. Admission materials must clearly state academic expectations, required communication skills, types of personal history disclosures that may be required, and professional standards for graduation. As a component of its evaluation plan, the college or school must regularly assess the criteria, policies, and procedures to ensure the selection of students who have the potential for academic success in the professional degree program and the ability to achieve the professional competencies and to practice in culturally diverse environments.

Student enrollment must be managed in alignment with available physical, financial, faculty, staff, practice site, preceptor, and administrative resources. The dean and a duly constituted committee of the college or school must share the final responsibility for enrollment and selection of students.

2. College or School's Self-Assessment

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>The college or school produces and makes criteria, policies, and procedures for admission to the professional degree program available to students and prospective students.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Admission materials clearly state academic expectations, required communication skills, types of personal history disclosures that may be required, and professional technical standards for graduation.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>As a component of its evaluation plan, the college or school regularly assesses the criteria, policies, and procedures to ensure the selection of students who have the potential for academic success in the professional degree program, the ability to achieve the professional competencies, and the disposition to practice in culturally diverse environments.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Student enrollment is managed in alignment with available physical, financial, faculty, staff, practice site, preceptor, and administrative resources.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The dean and a duly constituted committee of the college or school share the final responsibility for enrollment and selection of students.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Written and verbal communication skills are assessed for student admissions in a standardized manner.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Interviews are structured to consistently address key admission criteria for each applicant.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Interviewers have appropriate credentials and are trained in successful interview strategies and techniques.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Evaluation of professional attitudes and behaviors is a component of the student selection process.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The college or school develops and employs admission criteria that set performance expectations for admission tests, evaluations, and interviews used in selecting students who have the potential for success in the professional degree program and the profession.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The admission evaluation of students is documented and records are maintained by the college or school.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Admission criteria, policies, and procedures are not compromised regardless of the size and quality of the applicant pool.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>---</td>
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</tr>
<tr>
<td>In accordance with United States Department of Education regulations, the college or school has a process in place through which the college or school establishes that the student who registers in a distance education course or program is the same student who participates in and completes all course or program requirements and receives academic credit.</td>
<td>N/A</td>
</tr>
<tr>
<td>Consultation with ACPE occurs at least six months before recruiting students into new pathways or programs.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The college or school ensures that early assurance students are at least as well qualified as students accepted for direct entry into the first professional year. Early assurance agreements and policies allow the college or school to manage student enrollment in alignment with physical, financial, faculty, staff, practice site, preceptor, and administrative resources.</td>
<td>N/A</td>
</tr>
</tbody>
</table>

3. College or School's Comments on the Standard

**Focused Questions**

- Admissions and enrollment Information, highlighting how specific requirements of the standards and guidelines are met, including those for early admission agreements or policies, if applicable
- How admission evaluations of students is documented and how records are maintained.
- A description of the college or school's recruitment methods
- A description of methods used to assess verbal and written communication skills of applicants to the program
- How enrollment is managed in alignment with available physical, financial, staff, faculty, practice site, preceptor and administrative resources
- How curricular outcomes data are correlated with admissions data
- How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard
- Any other notable achievements, innovations or quality improvements
- Interpretation of the data from the applicable AACP standardized survey questions, especially notable differences from national or peer group norms

(School comments begin here)

SOP has 3 pathways for admission to the professional degree program: freshman admission (0-6, early assurance), transfer admission (internal or external candidates with college credit who transfer into the early assurance pathway within the first two years pre-pharmacy years), and direct-entry graduate track (DEGT). SOP has no formal admissions agreements with other institutions. (Q1,7)

Early assurance and transfer students apply through the Common Application and the university’s Office of Undergraduate Admissions (OUA) is responsible for reviewing those applications and maintaining records of all related information. The DEGT students apply through PharmCAS. The criteria, policies, and procedures for admission are available to students and prospective students on the Northeastern and SOP websites at [http://www.northeastern.edu/admissions](http://www.northeastern.edu/admissions) and [http://www.northeastern.edu/bouve/pharmacy](http://www.northeastern.edu/bouve/pharmacy). SOP web site includes complete academic and admission information, describes potential...
research opportunities, experiential learning through co-op, and other program information. It also provides access to a searchable database for course equivalency for those students who desire to transfer college credit. In addition, this site explicitly provides the detailed requirements of the Technical Standards for the PharmD program that includes intellectual abilities, communication skills, social maturity, and observational and motor skills. Over 90% of students agreed or strongly agreed the admissions process of the college/school of pharmacy was well organized on the 2014 AACP Student Survey. (Q2,5,7,9)

Prospective students who have a baccalaureate degree are also directed to the PharmCAS web page for detailed information specific for the DEGT. The PharmCAS website is the only marketing tool used for DEGT. NU uses recruiters around the country to attract students to all of its programs. Additional recruitment efforts for early assurance and transfer students include faculty and advanced standing student involvement within informational sessions as well as faculty participation in “Phone-a-thons” calling students at their home within a week of their known acceptance to the University. (Q3)

Pre-professional educational requirements for admission to the P1 year contain courses in the basic sciences, mathematics, information and communications technologies, general education (e.g., humanities, social sciences, a comparative study of cultures elective, etc), and physical sciences. Pre-requisites provide necessary scientific foundation and prepare students to successfully complete the rigors of the professional curriculum. (Q7)

Additional student information regarding curriculum, personal and academic conduct, progression requirements, health requirements that may be imposed for clinical rotations, and background checks may be found on the student Blackboard portal for DEGT student in the Direct-Entry PharmD Student Handbook (Appendix 17.15.1) and for early assurance students in the Undergraduate Student Manual (http://www.northeastern.edu/bouve/undergraduate/student-manual/). (Q1)

Admission evaluation for all prospective pre-pharmacy students considers four aspects of applicants: academic performance, performance on standardized tests, personal characteristics, and recommendations. To be considered for admission, a student would have consistently earned strong grades in academically rigorous high school or college courses. While Northeastern University does not have minimum score requirements for standardized tests, past students admitted via the early assurance or transfer pathways have earned highly competitive scores on the critical thinking and math sections of the SAT and/or the ACT exams. Northeastern also considers the writing portion of the SAT/ACT exams in these admission decisions. Highly valued personal characteristics include creativity, diversity, leadership, and a global perspective and resiliency/adaptability. The submission of a PCAT score is not required for the early assurance or transfer pathways, but is a requirement for direct-entry students entering the 2015 fall semester. (Q2)

Although the OUA is responsible for freshman admission evaluation, the dean of admissions and her staff meet at least twice annually with the school dean to review criteria for freshman admission and to ensure that any changes in selection criteria are understood and mutually agreeable. Transfer students who apply internally from other majors within the university or externally without a baccalaureate degree, apply through the Common Application and are evaluated by the Office of University Admissions, the Office of Student Services, and the dean of the SOP. (Q2)

Our freshman admission process yields well-qualified and diverse students with enrollment variables that consistently exceed those of students entering the university at large. Average SAT scores and GPAs for the fall 2014 pharmacy class were 1432, and 4.10, compared to 1414 and 4.02 for university students,
respectively. In our fall 2014 entering class, students came from 19 states and 8 different countries. We enroll freshman from many regions, countries, and ethnic backgrounds (Appendix 17.15.2).

External transfer student applications are evaluated by the OUA and the Bouve Office of Student Services (BOSS). They are held to the same high standards in terms of scholastic and overall achievement. Written communication skills are evaluated through their application essay and pre-requisite writing course grade.

Internal transfer students are also known as “change of major” students within the university. Starting fall 2015, the standards by which a student may change their major to pharmacy is the following:

- Minimum cumulative GPA of 3.500
- Minimum GPA of 3.000 in sciences courses
- Minimum of 12 credits of science courses in residence at the University

Change of major and external transfer students are integrated with the early assurance students in the sophomore year and are required to participate in the second year student progression interviews. (Q1,2)

Student class enrollment is targeted at 145 in the professional years of the program to maintain consistent alignment with physical, financial and personnel resources. The historically low attrition rate from the freshman to the P1 year has been supplemented through internal transfer students or DEGT students. The characteristics of students admitted through DEGT are available in Appendix17.15.3. While our freshman enrollments into the early assurance track have decreased in the past 2 years, we have been able to maintain stable enrollment in the professional years of our program with DEGT students. (Q5,9)

The Dean charges the Admissions Committee to oversee all aspects of admission of students into P1 year. For early assurance students in the NU pre-pharmacy program, students are guaranteed an interview if they meet minimum progression requirements outlined in the student handbook. The Admissions Committee oversees the interview process (see Appendix 17.2.1). The committee exclusively oversees the application, interview and acceptance process of students for direct-entry into the P1 year (Q1, 2, 5).

The PharmCAS website facilitates initial processing and allows the committee to easily stratify applicants based on baccalaureate degree, overall GPA, science GPA, and organic chemistry GPA prior to thorough review of the application. The PCAT score was integrated in the evaluation process for fall 2015 students. The committee reviews and discusses all applications remotely and at face-to-face meetings using a 3 point scoring system for each applicant (1 – highest rating, 2 – high rating, 3 – not recommended) and then reviews all highest rated applicants to determine who to invite for on-campus interviews.

Questions used during the interview process (Appendix 17.2.1) are from the standard questions developed for the early assurance sophomore student interviews and all related documentation is kept within SOP Dean's Office. (Q1,2,3)

All early assurance students must pass the standardized interview in addition to meeting all other progression requirements. The interviews take place in the spring of the sophomore year. The interview process, logistics, standardized questions and evaluation rubric are described in Appendix 17.2.1.
The process was formative to students in 2009 and 2010 allowing faculty to gain experience with the process and provide feedback for revision to the questions, rubric and how students were evaluated. Beginning with the P1 class entering Summer of 2011, the interview is high-stakes mandatory admission requirement. Appendix 17.5.4 contains information regarding outcomes of interviews for early assurance cohort. Documentation is kept within the Office of the Dean for the School of Pharmacy. (Q4)

The school, through the work of Academic Affairs and Curriculum Committees and BOSS, carefully monitors programmatic outcomes and success of admitted pharmacy students. Data are analyzed to identify factors that predict academic success (See Standard 19 for more info). In recent years, we have increased our GPA progression requirement from 2.75 to 3.0 for our early assurance students. Further strategies being considered to ensure the success of all students include: maintaining a GPA of 3.0 for all students in the professional years of the program, requiring a minimum science GPA for 0-6 students in order to progress to the P1 year, and considering the PCAT score to be a part of the sophomore interview evaluation / progression standard. By making these types of changes, we anticipate that it will create competition within the early assurance cohort in that the most academically proficient and committed to the profession will progress and that the available seats will be filled by transfer and direct-entry students.

4. College or School's Final Self-Evaluation

☑ Compliant  ☐ Compliant with Monitoring  ☐ Partially Compliant  ☐ Non-Compliant

5. Recommended Monitoring

(School comments begin here)
The college or school must produce and make available to students and prospective students transfer credit and course-waiver policies, based on rational procedures and defensible assessments.

2. College or School's Self-Assessment

<table>
<thead>
<tr>
<th>The college or school produces transfer credit and course-waiver policies, based on rational procedures and defensible assessments and makes that information available to students and prospective students.</th>
<th>Satisfactory</th>
</tr>
</thead>
<tbody>
<tr>
<td>The college or school implements policies and procedures for the evaluation of the equivalency of educational courses (preprofessional or professional) prior to admission or transfer to the professional degree program.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Requisites are only waived based upon an educationally sound assessment of the professional competencies (as set forth in Standard 12) that have been achieved through continuing pharmacy education, other postgraduate education and training, and previous pharmacy practice experience.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The college or school has established and implemented policies and procedures for students who request to transfer credits or who wish to change from one program pathway to another.</td>
<td>Satisfactory</td>
</tr>
</tbody>
</table>

3. College or School's Comments on the Standard

**Focused Questions**

- ✔️ The number of transfer students, including (if applicable) international students or graduates of other professional degree programs admitted with advanced standing, and an assessment of the correlation between the criteria in the transfer policy and success in the program. If applicable, comparative performance data should be provided
- ✔️ How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard
- ✔️ Any other notable achievements, innovations or quality improvements

(School comments begin here)

The Office of Undergraduate Admissions manages transfer of credit prior to student matriculation, and the Bouve College Office of Student Services manages transfer of credit after a student is enrolled. Guidelines are published in the university’s Undergraduate Day School Catalog and at [http://www.northeastern.edu/admissions/application-information/transfer-credit/](http://www.northeastern.edu/admissions/application-information/transfer-credit/). (Q2)

The university has an extensive database of equivalent courses from other colleges and universities and a standardized process for students to receive transfer credit if appropriate. The course equivalence database is located at [http://neubos3ss375v.nunet.neu.edu/transfercredit/TransferCreditevaluatedstudent2.asp](http://neubos3ss375v.nunet.neu.edu/transfercredit/TransferCreditevaluatedstudent2.asp). (Q2)

Transfer or advanced placement credits occur upon admission to the pre-professional years. In the rare circumstance where a student might seek transfer credit for a professional course, the Northeastern
University Transfer system, based out of the admissions office, notifies the Director of Undergraduate and Professional Programs when a student makes a request. The Director then reviews the request for pharmacy course equivalence with appropriate consultation of instructors of record and makes the determination if credit can be awarded, and for what equivalent course. Once that is complete, the degree audit for the student is then updated by the system, allowing the transferred course to fulfill the requirement in the students degree audit. This information is sent to the registrar’s office so the transfer equivalency database can be updated. Since the last accreditation visit in 2009, there were no requests for transfer credit for professional (PHMD or PHSC) courses in our curriculum. (Q1)

Northeastern University School of Pharmacy does not offer a nontraditional curricular pathway. Northeastern University School of Pharmacy and The Department of Health Sciences offer a combined Doctor of Pharmacy (PharmD) and Masters in Public Health (MPH) degree program track. Students currently enrolled in the PharmD program can apply to the MPH graduate program during their P2 or P3 year. Students in the combined degree program continue to meet the core curriculum requirements of the Doctor of Pharmacy program and take core MPH courses in the PharmD elective slots. The duel degree program adds an additional year to the traditional 6 year PharmD degree. This new program was approved in 2014 and has no enrollments currently (Q2,3)

4. College or School's Final Self-Evaluation

- [ ] Compliant
- [ ] Compliant with Monitoring
- [ ] Partially Compliant
- [ ] Non-Compliant

5. Recommended Monitoring

(School comments begin here)
19. Progression of Students

The college or school must produce and make available to students and prospective students criteria, policies, and procedures for academic progression, academic probation, remediation, missed course work or credit, dismissal, readmission, rights to due process, and appeal mechanisms.

2. College or School's Self-Assessment

<table>
<thead>
<tr>
<th>The college or school produces and makes available to students and prospective students criteria, policies, and procedures for academic progression, academic probation, remediation, missed course work or credit, dismissal, readmission, rights to due process, and appeal mechanisms.</th>
<th>Satisfactory</th>
</tr>
</thead>
<tbody>
<tr>
<td>The college or school's system of monitoring student performance, based on formative assessments of learning outcomes provides for the early detection of academic difficulty.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The college or school maintains a record of student retention, attrition, and on-time graduation, identifies and analyzes trends, and makes programmatic adjustments as needed.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The college or school ensures that all students have comparable access to individualized student services such as comprehensive academic success counseling, tutoring and faculty advising.</td>
<td>Satisfactory</td>
</tr>
</tbody>
</table>

3. College or School's Comments on the Standard

**Focused Questions**

- How student matriculation, progression and graduation rates correlate to admission and transfer policies and the college or school's mission
- The academic counseling and/or student support staff available to work with students seeking to retain or regain good academic standing, and how extensively they are utilized
- How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard
- Any other notable achievements, innovations or quality improvements
- Interpretation of the data from the applicable AACP standardized survey questions, especially notable differences from national or peer group norms

(School comments begin here)

Students must be in good academic standing to progress with their class. The staff from the Bouve College of Health Sciences (BOSS), who is responsible for reviewing the academic progress of all undergraduate Doctor of Pharmacy students (P1-P3 years) at the end of each semester, notifies those students who fall below the minimum requirements for progression. DEFT students are monitored by the Bouve Graduate Office of Student Services (BGSOSS). The Office of Experiential Education and the SOP Assistant Dean for Academic Affairs work closely with BGOSS to monitor all students’ progress during the P4 year. Progression standards are based not only on prior satisfactory academic achievement, but also on adherence to the Professional Code of Conduct (see Standard 23), which incorporates elements of professional behavior and academic integrity, and the interview process (see Standard 17). (Q1)

Probation, Dismissal, and Appeals

Students who are subject to academic probation or dismissal from the program as a result of non-adherence to the progression standards are entitled to the right of due process and academic appeal. The School of Pharmacy Academic Affairs Committee (AAC) is responsible for hearing appeals related to academic warnings, probation, dismissal, permission to resume studies, changes in requirements, and repeating courses from undergraduate pre pharmacy and PharmD students (P1-P3). Bouve Graduate ACC was responsible for GDET and all P4 students through the summer of 2015. To ensure consistency and continuity, SOP AAC will begin to hear all appeals from all pre-pharmacy and pharmacy students starting in the fall of 2015. The AAC consists of seven voting members: three from each department of the school and a representative from the Division of Co-operative Education. The Assistant Dean for Academic Affairs (Ex-Officio) and an administrative representative from the OSS serve as non-voting members. The process to appeal a decision is available in the Bouvé College of Health Sciences Undergraduate Information Manual and the Graduate Manual and is summarized in greater detail in (Appendix 19.3.2). (Q3)

Proactive Measures to Maximize Student Success

Since 2008, the AAC has been reviewing the progression of all students who have had academic difficulty with pre-professional courses, particularly science-based courses, to better guide the AAC’s recommendations for remediation/continuation in the Doctor of Pharmacy program. The committee has repeatedly observed that students with academic difficulty in Organic Chemistry I/II tend to have difficulty in Pharmacology/Medicinal Chemistry I/II and then academic issues in the Comprehensive Disease Management (CDM) modules of the curriculum. The AAC’s prospective process of using academic progression statistics as predictive measures of future success in subsequent courses has led to this committee’s informed, evidence-based approach (and a more strict adherence to course prerequisites) for students with academic appeals. Although this process typically involves AAC decisions resulting in student drop-backs, the AAC has strongly affirmed that students are better prepared to succeed when they have mastered the foundational course concepts. (Q3,4)

In 2007, Northeastern University introduced a Faculty/Advisor Communication Tool (FACT) that provides a method of providing feedback to students and academic advisors for early intervention, coaching, and assistance. FACT is located in the faculty view of each course in Blackboard. Throughout the semester, faculty can use FACT to submit warnings, attendance reports, and progress reports to students and their OSS advisors plus the SOP’s Assistant Dean for Academic Affairs. Students are then contacted by the...
student services advisor to schedule meeting with them and their faculty, if advised. This information is shared with the SOP’s Assistant Dean for Academic Affairs, who arranges tutoring services and meets with students individually to discuss learning/teaching strategies. (Q2,4)

**Academic Assistance and Tutoring**

During the 2009 reporting cycle, we identified the need to provide additional tutoring services, particularly for P2 and P3 students in our advanced pharmacy courses. Under the direction of the office of the Assistant Dean for Academic Affairs, the SOP has implemented a much more robust tutoring system aimed at all levels of professional students, in an effort to increase their overall success and progression within our program. (Q4)

Academic assistance and tutoring are provided through a variety of resources (Appendix 19.3.3). The Peer Tutoring Program offers a wide variety of tutoring services to meet the academic needs of NU undergraduate students. Tutoring is provided for many introductory level courses, as well as some of the upper-level courses in the NU Core. The goal of the Peer Tutoring Program is to support our learning community by promoting independent and active learning and to have a direct and positive effect on improving academic achievement. The program’s mission is to empower students by engaging them with the curriculum in order for them to reach their full academic potential. The Peer Tutoring Program is committed to working closely with the faculty in the academic departments in order to firmly ground tutoring as an extension of the classroom experience. Students are able to book tutoring appointments via their MyNEU portal. Tutoring services are free and open to all NU undergraduate students.

Rho Chi Honor Society student members serve as tutors for Pharmacology/Medicinal Chemistry I and II and Comprehensive Disease Management I, II, III, and IV. All Rho Chi students who chose to serve as tutors must receive College Reading and Learning Association (CRLA) certification – Level 1 prior to be assigned as a tutor.

Since 2010, a structured tutoring and advising program for the professional years (P1-P3) has been coordinated by the SOP’s Office of Assistant Dean for Academic Affairs. As part of the continued monitoring for student success based on our historical data (prerequisite courses, GPA, etc.), students who may benefit from tutoring services are identified. Students are notified about small group (up to 20 students per session) and micro (up to 5 students per session) tutoring availability as well as the opportunity to meet with the Assistant Dean to explore and discuss effective learning and studying strategies. Students who wish to meet with the Assistant Dean are asked to complete a pre-meeting survey about their current studying habits and learning preferences. This information is reviewed with the student to identify new learning and studying strategies. Based on student feedback, an overview of effective learning and studying strategies has been incorporated in the P1 student orientations.

More recently, with the adoption of ExamSoft, the Assistant Dean incorporates the "Strengths and Opportunities" reports into the meetings with at-risk students. For more information on tutoring services offered and utilized, see Appendix 19.3.4. (Q2, 4)

Additional academic support services are available from the University’s Disability Resource Center, the English Language Center, the Writing Center, and course teaching assistants.

Survey data confirms that our efforts in improving tutoring services have been successful (data displayed under Standard 16). In 2012, 61.7% of students reported they did not use tutoring services compared

Northeastern University / Bouve College of Health Sciences, School of Pharma
with only 29.5% in 2014. Sixty three percent of students agreed or strongly agreed that tutoring services met their need. The more robust tutoring and learning/studying strategies has also contributed to our on-time graduation rates, which have increased from 74.78% in 2011 to 85.81% in 2014. (Q4, 5)

The school carefully monitors attrition, retention, progression and on-time graduation rates. AAMS data display is out of date and inaccurate, please refer to Appendix 19.3.5 for up to date information. The school has made significant strides in improving both the on-time graduation rate from 75% to 86% between 2011 and 2014. Additionally our overall graduation rate has improved from 86% to 93% in the same time period. This improvement is attributed in part to the higher caliber of students upon entry, more rigorous admission requirements, and academic support provided to students. (Q1, 4, 5)

4. College or School's Final Self-Evaluation

☑ Compliant  ☐ Compliant with Monitoring  ☐ Partially Compliant  ☐ Non-Compliant

5. Recommended Monitoring

(School comments begin here)
20. Student Complaints Policy

The college or school must produce and make available to students a complaints policy that includes procedures to be followed in the event of a written complaint related to one of the accreditation standards, student rights to due process, and appeal mechanisms. Students must receive information on how they can submit a complaint to ACPE for unresolved issues on a complaint related to the accreditation standards.

2. College or School's Self-Assessment

<table>
<thead>
<tr>
<th>The college or school produces and makes available to students a complaints policy that includes procedures to be followed in the event of a written complaint related to one of the accreditation standards, student rights to due process, and appeal mechanisms.</th>
<th>Satisfactory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students receive information on how they can submit a complaint to ACPE for unresolved issues on a complaint related to the accreditation standards.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The college or school includes information about the complaint policy during student orientation.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The college or school maintains a chronological record of student complaints related to matters covered by the accreditation standards and allows inspection of the records during on-site evaluation visits by ACPE.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The college or school informs ACPE during an on-site evaluation if any of the student complaints related to the accreditation standards have led to legal proceedings, and the outcomes of such proceedings.</td>
<td>Satisfactory</td>
</tr>
</tbody>
</table>

3. College or School's Comments on the Standard

**Focused Questions**

☑️ How the complaint policy is communicated to students
☑️ The number of complaints since the last accreditation visit and the nature of their resolution
☑️ How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard
☑️ Any other notable achievements, innovations or quality improvements
☑️ Interpretation of the data from the applicable AACP standardized survey questions, especially notable differences from national or peer group norms

(School comments begin here)

The Student Complaints Policy and Procedure was developed by the SOP Executive Committee in 2008 (see Appendix 20.1.1). Both the Student Complaints Policy and Procedure and the Student Complaint Form are clearly identifiable on the SOP website (http://www.northeastern.edu/bouve/pharmacy/accreditation). Students from each year in the degree program are informed of the policy and procedure to file a complaint via a classroom visit by the dean of the SOP every fall semester (with the exception of those students off-campus on co-op). Effective fall 2014, the policy and procedures are also reinforced during the P1 year orientation, where all students receive a copy of the policy and procedures.
and sign that they have read and understand it (records are kept at the dean's office). Furthermore, a chronological record of student complaints is maintained in the dean's office. (Q1,3)

Since the previous accreditation cycle, no complaints related to accreditation standards have been submitted. (Q2)

On the 2014 AACP Graduating Student Survey, 84% of our students agreed or strongly agreed that the college has a process for which students can raise issues with the school's administration. These data are comparable to national cohort. Since 2009 we have seen consistent improvement on this question reflective of leadership efforts to increase student awareness of the Complaints Policy and Procedure and the open door policy that the faculty and administrative leaders have at our school. (Q4,5)

<table>
<thead>
<tr>
<th>4. College or School's Final Self-Evaluation</th>
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</thead>
<tbody>
<tr>
<td>☑ Compliant</td>
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</tbody>
</table>

5. Recommended Monitoring

(School comments begin here)
Northeastern University / Bouve College of Health Sciences, School of Pharma

### 21. Program Information

The college or school must produce and make available to students and prospective students a complete and accurate description of the professional degree program, including its current accreditation status.

### 2. College or School's Self-Assessment

| The college or school produces and makes available to students and prospective students a complete and accurate description of the professional degree program, including its current accreditation status. | Satisfactory |
| Admissions policies, procedures, and practices fully and clearly represent the conditions and requirements related to distance learning, including full disclosure of any requirements that cannot be completed at a distance. | N/A |

### 3. College or School's Comments on the Standard

**Focused Questions**

- [x] How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard
- [x] Any other notable achievements, innovations or quality improvements
- [x] Interpretation of the data from the applicable AACP standardized survey questions, especially notable differences from national or peer group norms

(School comments begin here)

The School of Pharmacy has, and continues, to meet the criteria for this standard to a high degree. Students are directed toward the School of Pharmacy website (http://www.northeastern.edu/bouve/pharmacy/programs/pharmd/), to obtain and review all of the pertinent areas of information contained within this standard including our current accreditation status, the degree programs, course programming, student handbook and descriptions of the coursework they can expect to complete within this program. Each of these areas and pieces of information are reviewed, at least once per academic year, and updated accordingly. This is done in an effort to ensure the most accurate information is being provided to our current and prospective students, their families and anyone else interested in our School of Pharmacy. (Q1)

The university's Undergraduate Course Catalog, Bouve undergraduate manual, and the School of Pharmacy information manual are provided to enrolled students and available to prospective students in print and electronic formats. These documents are reviewed and modified annually to incorporate new or revised policies and to ensure completeness and accuracy, and can be found at the following links (Q1): [http://www.northeastern.edu/registrar/courses/welcome1415.html](http://www.northeastern.edu/registrar/courses/welcome1415.html)

Beginning in 2013, the School complied with the new requirement from ACPE and Department of Education to post quality indicators for our program that are made available on our website and these have been updated for each graduating cohort of students. (Q2)

The data from AACP graduating student survey reveals that majority of the students (92-97% since 2009) agree or strongly agree that the SOP provided timely information about news, events and important matters within the college/school of pharmacy. All pharmacy students completing the survey in 2014 agreed or strongly agreed they were aware of expected behaviors with respect to professional and academic conduct. These data are similar to national cohort responses. (Q3)

4. College or School's Final Self-Evaluation

- [ ] Compliant
- [ ] Compliant with Monitoring
- [ ] Partially Compliant
- [ ] Non-Compliant

5. Recommended Monitoring

(School comments begin here)
22. Student Representation and Perspectives

The college or school must consider student perspectives and include student representation, where appropriate, on committees, in policy-development bodies, and in assessment and evaluation activities.

The college or school considers student perspectives and includes student representation, where appropriate, on committees, in policy-development bodies, and in assessment and evaluation activities. Satisfactory

The college or school involves student representatives on appropriate program committees, as well as in accreditation self-studies and strategic planning activities. Satisfactory

The pharmacy students feel their perspectives are heard, respected, and acted upon in a fair and just manner. Satisfactory

A clear process exists for students to follow to raise issues with the college or school administration. Satisfactory

The college or school administration responds to problems and issues of concern to the student body. Satisfactory

3. College or School's Comments on the Standard

Focused Questions

☑ The participation and contribution of students on college or school committees

☑ The organization, empowerment, and implementation of a student government association or council

☑ The other methods (e.g., focus groups, meetings with the Dean or other administrators, involvement in self study activities, review of student complaints) used to gather student perspectives

☑ Examples of quality improvements in the college or school that have been made as a result of student representation and perspectives

☑ How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard

☑ Any other notable achievements, innovations or quality improvements

☑ Interpretation of the data from the applicable AACP standardized survey questions, especially notable differences from national or peer group norms

(School comments begin here)

Comments and suggestions made by the student body are of highest importance to the school's administration and faculty. The following committees include a student representative: Steering, Curriculum, Assessment, Student Professional Development and Professional Affairs (Appendices 22.1.1-2). P1-P4 student interest to serve on the committees is requested in response to an email detailing the committee charges. All student names and committee interests are compiled and utilized by the Dean & Assistant Dean to populate student members to committees. (Q1)
During our self-study process, a total of 15 students participated on various committees. Student participation included: attending committee meetings, providing valuable student insight during the process, and being involved with the development of the self-study report. Student committee members also summarized self-study report and solicited additional input from their colleagues during the Self-Study Town Hall meeting. (Q1)

The Pharmacy Student Governing Organization (PSGO) adds structure to student government, represents every class, and has direct access to the SOP Dean’s Office. The purpose of the PSGO is to encourage professional and educational advancement among students and faculty and to unite and conduct the affairs of the students of the School of Pharmacy in co-operation with the faculty, the alumni, and the community at large. There have been an increase in student groups within the SOP and the PSGO board helps to oversee these groups. The executive board consists of the PSGO president, president-elect, immediate past-president, secretary, treasurer, member-at-large, the elected board members from the student organizations, and also includes the four (4) class representatives from each class (Appendix 22.2.1). The PSGO serves as a forum for students to bring ideas and concerns to the school’s administration. Student representatives are asked to make announcements or solicit feedback from their classmates on issues requiring attention from administration. Through a feedback loop, these ideas and concerns are then transmitted back to the faculty. Student leaders also are actively involved with the Bouvé College Student Dean’s Council. In the fall 2014 the PSGO has started a “PSGO Weekly Dose” that is sent at the beginning of the week to inform the student body & faculty of upcoming events. (Q2)

SOP employs formative and summative evaluations to obtain student perspectives in program evaluation and development. At the school level, the PSGO conducts a formative faculty and curricular evaluation using mid-semester feedback from students. The university’s TRACE system is systemically employed to obtain course evaluations (See standards 3 and 15) (Q3, 6)

Since the previous accreditation, SOP held periodic town hall meetings (Appendix 22.2.2). Data gathered through these has informed our 2012 curricular and the 2014 portfolio revisions. Specific changes implemented are described in detail in the Curriculum standards, but most notably course sequence and improved flexibility as well as the development of a number of new elective courses were the direct result of the feedback obtained from the students. Additionally, the strategic plan contains a goal dedicated to developing and refining personalized education experience for students (See standard 2). (Q3,4)

Student representation and perspectives have led to important changes to ensure that students are provided with equitable representation regardless of the program pathway in which an individual student may be enrolled. Previously, entry-level graduate students were not able to serve in student government leadership positions. Faculty and students worked to resolve this and as of November 2014, all students can serve in leadership roles (except treasurer). (Q6)

Our SOP has seen improvement in student perceptions of effective student government. In 2014, 84% of students agree or strongly agree that effective student government exists at our school compared to only 72% in the 2009 self-study. The SOP has done a lot since 2009 to restructure PSGO, increase the number of student organizations, and incorporate students on the committees and as the result, student perceptions on this question have improved. This is an excellent example of how we recognized a problem, instituted changes (including instructing committee chairs to schedule meetings when students are available) and saw positive results on student surveys. Ninety four percent of our students
(90% national) favorably responded to the school’s use of course evaluations and surveys to obtain student perspectives and needs. Furthermore, 90% of NU students felt that the school’s administration responded to problems and issues of concern (82% national). (Q5,6,7)

4. College or School’s Final Self-Evaluation

<table>
<thead>
<tr>
<th>Compliant</th>
<th>Compliant with Monitoring</th>
<th>Partially Compliant</th>
<th>Non-Compliant</th>
</tr>
</thead>
</table>

5. Recommended Monitoring

(School comments begin here)
23. Professional Behavior and Harmonious Relationships

The college or school must provide an environment and culture that promotes professional behavior and harmonious relationships among students, faculty, administrators, preceptors, and staff. Faculty, administrators, preceptors, and staff must be committed to developing professionalism and fostering leadership in students and to serving as mentors and positive role models for students.

2. College or School's Self-Assessment

<table>
<thead>
<tr>
<th>The college or school provides an environment and culture that promotes professional behavior and harmonious relationships among students, faculty, administrators, preceptors, and staff.</th>
<th>Satisfactory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty, administrators, preceptors, and staff are committed to developing professionalism and fostering leadership in students and to serving as mentors and positive role models for students.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The college or school develops, via a broadly based process, a policy consistent with university policies on student, faculty, preceptor, and staff professionalism that defines expected behaviors and consequences for deviation from the policy, as well as due process for appeals.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The activities undertaken by the college or school to promote professional behavior are effective.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The activities undertaken by the college or school to promote harmonious relationships are effective.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The activities undertaken by the college or school to promote student mentoring and leadership development are effective.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Faculty receive support from peers to participate in student mentoring and leadership development activities, and these efforts are viewed favorably by college or school administration.</td>
<td>Needs Improvement</td>
</tr>
<tr>
<td>The college or school supports students, faculty, administrators, preceptors, and staff participation, where appropriate, in pharmacy, scientific and other professional organizations.</td>
<td>Satisfactory</td>
</tr>
</tbody>
</table>

3. College or School's Comments on the Standard

Focused Questions

- Strategies that the college or school has used to promote professional behavior, and the outcomes
- Strategies that the college or school has used to promote harmonious relationships among students, faculty, administrators, preceptors, and staff; and the outcomes
- Strategies that the college or school has used to promote student mentoring and leadership development, and the outcomes
- How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard
- Any other notable achievements, innovations or quality improvements
Interpretation of the data from the applicable AACP standardized survey questions, especially notable differences from national or peer group norms

(School comments begin here)

Faculty and students work together to promote professional behavior and the outcomes in numerous ways. Pharmacy Student Governing Organization (PSGO) as an umbrella organization over 11 professional student organizations (Appendix 23.2.1). PSGO bylaws state that the group is “an empowering and nurturing environment for student pharmacists at NU to make significant contributions to the community, the school, and the pharmacy profession”. All students enrolled with the SOP, in good academic standing, are eligible for membership. PSGO and the student groups organize many events to achieve their missions. These events include group meetings, fundraisers, portfolio events, and are meant to expose students to important issues in health care or career opportunities, as well as promote harmonious relationships between faculty and students. PSGO maintains a school-wide event calendar and sends a “Weekly Dose” email summarizing all upcoming events to all students and faculty (Appendix 23.2.2). (Q1,2)

Over 95% of all students responding to the AACP graduating student survey have agreed or strongly agreed that “faculty, administrators and staff were committed to serving as positive role models for students” and that “preceptors modeled professional attributes and behaviors in the pharmacy practice experiences”. Every student agreed or strongly agreed in 2014 that they were aware of expected behaviors with respect to professional and academic conduct. At the same time, students’ perceptions of how the school manages academic and professional misconduct can be further improved. While the attitudes improved from their lowest 2010, we would like to see a further improvement in students’ perceptions. (Q6)

PSGO and the Assistant Dean for Academic Affairs have worked diligently to raise awareness among students and faculty about academic integrity, plagiarism, and consequences of academic misconduct. The school works closely with the NU Office of Conflict and Conduct Resolution (OSCCR) and reinforces university’s policy on academic integrity, which is included as part of the standard syllabus template at the SOP. Over the past year PSGO has developed a school-specific Code of Professional Conduct (Appendix 23.1.1). This policy was approved by students and faculty at the beginning of 2015. (Q1,5)

The school reinforces and evaluates professionalism in many other ways from the annual White Coat Ceremony for P1 students to formal incorporation and assessment in didactic and experiential curriculum. Professionalism CAPE outcome is reinforced in 60% of our didactic courses, all required IPPEs and APPEs, and our professional portfolio (See Standards 12 and 15). (Q1)

The school remains highly committed to leadership development among our students. In addition to faculty support in the form of advising and mentoring for all professional student organizations (Appendix 23.2.1), each student organization has access to up to $1000 per organization that may be requested for professional development, such as professional meeting attendance from the Dean's office. Additionally, students can submit individual requests for consideration. Since 2010, the Phi Lambda Sigma (PLS) Pharmacy Leadership Society, in collaboration with PSGO, has offered an annual leadership retreat for all the student leaders and involved many of the faculty in these as well. Team building activities and a diversity component are incorporated into each retreat with a leadership theme for the professional development component. Some of the more recent themes have included Strength-Based Leadership, Colors of Leadership, interprofessional leadership, and strategic planning. Over 90% of students agreed or strongly agreed on the 2014 survey that “administration and faculty encouraged me to participate
in regional, state or national pharmacy meetings”. Internal 2014 exit survey also revealed that 75% of our students were members of one of the SOP professional pharmacy organizations and 62% were members of a national pharmacy organization (Appendix 23.2.3). (Q3,5,6)

The school also works to promote harmonious relationships among students, faculty, administrators, preceptors, and staff. Students are afforded a number of opportunities to engage with their faculty members outside of class through service learning activities, social activities coordinated through the Dean of Bouve’s office, and other, similar, types of events. As mentioned in Standard 22, student perspective is heard in committee meetings, during the self-study process, at regularly held townhall meetings and via mid-semester and end of the semester course evaluations. (Q2)

Faculty willingly participate in many of the events organized by the students. For the past 8 years, Phi Delta Chi organizes a Bouve-wide Health Fair on campus. In 2014, over 2,800 students, faculty, and staff attended the fair to receive free flu shots, participate in a blood drive, cholesterol testing, and other health screenings. Many of the faculty and staff help with the organization of this event and faculty administer flu shots. PDC involves all other students organizations at the SOP as well as their colleagues in the School of Nursing and Health Sciences programs. Other examples of faculty student collaboration include basketball games, walks and runs to fundraise money for various organizations, and special events hosted annually by various student organizations. Rho Chi chapter holds annual RxWars where faculty and student teams battle with each other on their pharmacy trivia knowledge using game format. Most recently in 2014 and 2015 Rho Chi organized an auction event where faculty and students can donate “events” to raise money for Relay for Life ($3000 raised in 2014 and 2015). Examples of “events” including attending Red Sox or Celtics games, going bowling or having a game night, as well as many dining options offered by faculty and students from home cooked meals to going out for BBQ. (Q2)

The Office of Experiential Education has undertaken several improvements including more clear delineation of appointment and promotion criteria for adjunct faculty preceptors, availability of preceptor development documents, and preceptor recognition to promote the relationships among faculty, preceptors and students. It should be noted that in the first year of its inception, the NU SOP put forth a candidate for the AACP Master Preceptor program, who was ultimately recognized for their consistent contribution as an exceptional preceptor to our students in their P4 year. (Q2)

During our last self-study (prior to 2009 visit), we identified student participation in research activities as an area for improvement. Great strides have been made to make students aware and engage them in research opportunities with our distinguished faculty. Rho Chi has published an annual Research Compendium (Appendix 23.2.4) since 2009. Since 2012 the SOP has placed a total of 47 students on research COOPs (29 with campus-based faculty and 18 at pharmaceutical companies). Additionally, during this same time-frame the SOP has placed a total of 67 students in a variety of research related APPEs. We are working on a better system to accurately quantify student participation in research but many faculty involve students as co-authors on their posters and publications. Student agreement with the question “I was aware of opportunities to participate in research activities with faculty” has increased from 68% in 2009 to 83-88% in 2013-14 and these perceptions are better than that of the national cohort. (Q4-6)

The school remains committed to ensuring students’ exposure to post-graduate training opportunities. Each year, faculty hold formal sessions to inform students about post-graduate training opportunities including residencies, fellowships, and additional degree programs. Mid-APPE on campus meeting
agenda is largely dedicated to providing information on job search and post-graduate training application process each fall. Our students are also formally invited to attend Regional Residency Showcase held on MCPHS University Campus each fall. Over the past few years, our faculty have been involved in Massachusetts Society of Health System Pharmacists Early Careerist Network events aimed at providing MA pharmacy students with opportunities to network with local residents and residency directors and get useful advice about applications and interviews. We have also hosted fellowship info sessions from the Rutgers program and local MA fellowship programs. Additionally, many of the student organizations hold information sessions and invite residents or residency directors to discuss the importance of post-graduate education. Many of our students pursue residencies. In the class of 2014, 41 students matched into PGY1 positions (several more through scramble). While our overall match rate is similar to national (63%), almost 50% of our graduates opt to participate in the match, while only about 1/3 of graduates nationally decide to do so (Appendix 23.2.5). This results in about 30% of our graduates ending up matched in a PGY1 residency, compared to a national average around 20%. Over 90% of our students consistently agree on the AACP survey that they were aware of additional educational opportunities (Q4-6).

While faculty feel the support of their peers in student mentoring and development activities (e.g. attending events, judging skill competitions, etc), they would like to see more recognition for their efforts by the school, college, and university administrators particularly during annual performance evaluations and during promotion. This area for improvement has been communicated to the department chair of the PHSS and the school dean. The new PHSS strategic plan includes a goal to address this concern (Q4).

4. College or School's Final Self-Evaluation

|☐ Compliant | ☑ Compliant with Monitoring |☐ Partially Compliant |☐ Non-Compliant |

5. Recommended Monitoring

(School comments begin here)
Monitor student and faculty perceptions on how the school manages academic and professional misconduct after full implementation of the new SOP specific Code of Professional Conduct Policy.

Additionally, monitor perceptions of faculty regarding administration fully recognizing and valuing their service contributions related to student leadership development and mentorship, particularly during annual performance evaluations and promotion.
Northeastern University / Bouve College of Health Sciences, School of Pharma

24. Faculty and Staff - Quantitative Factors

The college or school must have a sufficient number of qualified full-time faculty and staff to effectively deliver and evaluate the professional degree program, while providing adequate time for faculty development, research and other scholarly activities, service, and pharmacy practice.

2. College or School's Self-Assessment

The college or school has a sufficient number of qualified full-time faculty to effectively deliver and evaluate the professional degree program, while providing adequate time to ensure that the following are achieved:

- effective organization and delivery of the curriculum through classroom, small group, laboratory, practice simulation, service learning, and oversight and provision of experiential education
  - Satisfactory
- faculty mentoring
  - Satisfactory
- student advising and mentoring
  - Satisfactory
- research and other scholarly activities
  - Satisfactory
- faculty development as educators and scholars
  - Satisfactory
- professional/community service and pharmacy practice (where indicated by their position)
  - Satisfactory
- participation in college or school and university committees
  - Satisfactory
- assessment and evaluation activities
  - Satisfactory

The college or school has a sufficient number of qualified full-time staff to effectively support the delivery and evaluation of the professional degree program.

- Faculty receive adequate support staff resources.
  - Needs Improvement

The college or school periodically conducts faculty workload and needs assessments, at appropriate intervals.

- Satisfactory

3. College or School's Comments on the Standard

Focused Questions

- ☑ A description of the process and interval for conducting faculty workload and needs assessments
- ☑ An analysis of teaching load of faculty members, including commitments outside the professional degree program
- ☑ The rational for hiring any part-time faculty, and the anticipated duration of their contract
- ☑ Evidence of faculty and staff capacity planning and succession planning
- ☑ A discussion of the college or school's student-to-faculty ratio and how the ratio ties in with the college or school's mission and goals for the program
- ☑ How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard
- ☑ Any other notable achievements, innovations or quality improvements
Interpretation of the data from the applicable AACP standardized survey questions, especially notable differences from national or peer group norms.

(School comments begin here)

The school consists of two departments: the Department of Pharmaceutical Sciences (DPS) and the Department of Pharmacy and Health Systems Sciences (DPHSS, previously called Pharmacy Practice). DPHSS was renamed in 2014 to accurately reflect the make up of the department which houses clinical, social administrative sciences, and faculty involved in the Office of Experiential Education (OEE). Overall 56 faculty are currently employed (3 are part time) with several open searches in 2015-5 in DPHSS and 2 in DPS (UPDATE AUG WITH FILLED POSITIONS). Faculty are well balanced in terms of their disciplines and rank/years of experience to meet the needs of the program and school mission. (Q6)

Since the last self-study 7 new faculty lines were added in response to increased enrollments at that time (see Appendix 24.7.1). The AACP Office of Institutional Research reported that our student to faculty ratio is currently 10.5:1 (ranked 28/61 private schools of pharmacy; national average is 11.2:1 and median 10.6). Our faculty student ratio falls slightly below national average of 11.2:1 and median of 10.6:1 (for private pharmacy schools). Our current ratio is also significantly lower than the faculty student ratio of 11.7:1 reported on our previous self-study in 2009. The present level of staffing of our full and part-time faculty in the DPHSS has allowed us to maintain a student/clinical faculty ratio of 3:1 during APPEs. Approximately 35-40% of all APPEs are precepted by faculty. Adjunct faculty precept the remainder of APPEs. The student to faculty ratio for adjunct preceptors is typically 2:1 or 1:1. During IPPEs students are typically assigned preceptors in a 1:1 ratio. (Q5,7)

Currently we have 8 co-funded faculty positions. A co-funded clinical faculty position is considered to be 1 FTE since the workload responsibilities are similar to that of fully-funded faculty. The major difference in workload is service responsibilities—co-funded faculty provide more services at their practice sites and do not coordinate courses. (Q5-7)

Since the last self-study, 3 faculty received tenure, 12 received promotions (See Appendix 24.7.2). Majority of the faculty and staff turnover since the last accreditation visit is due to retirement or resignation, however there were also several negative tenure decisions. Those who resigned most often did so due to desire to move for family reasons or better career opportunities. (Q4,6)

Since the 2009 accreditation visit, several improvements were made with faculty appointments to better support SOP operations. Administrative team has been expanded (see Standard 7, Appendix 24.3.1) with the addition of 2 director positions (Assessment and Undergraduate Education and Professional Programs). Another vice-chair position was added in the DPHSS. These positions were filled with existing faculty whose teaching responsibilities were reduced to accommodate these additional administrative appointments. Two faculty members who previously served as university-supported Co-op coordinators for the PharmD program have now been incorporated within the School's OEE. (Q7)

Administrative and professional staff members support the operations of the school and the faculty. The Dean’s office is supported by the Assistant Director of Operations who oversees support staff in both departments. Since the 2009 accreditation visit, two DPHSS administrative assistants, one DPS budget/administrative coordinator, and one DPS lab supervisor position has been added (see Appendix 24.7.1). Throughout the year, staff receive support from work study students and faculty are supported by teaching assistants. Computer services, digital media services, and information services are available from the university and discussed more extensively in Standard 29. Additionally faculty receive support

Northeastern University / Bouve College of Health Sciences, School of Pharma
from Bouve Office of Research and Bouve Dean’s office, particular the Office of Student Services, the Associate Dean for Faculty (assists with faculty recruitment, mentoring, tenure and promotion process), and the Associate Dean for Academic Affairs. University’s Center for Advancing Teaching and Learning through Research (CATLR) offers many development programs each month and provides instructional design support for our faculty. (Q6,7)

Scientist faculty are offered generous start-up packages to set up needed laboratory space. Tenure-track faculty and clinical faculty are assigned a mentor soon after arrival at the school. University initiatives such as the ADVANCE Mutual Mentoring Advancement Program grant also promote alternative models of mentoring and opportunities for early career faculty. New pharmacy practice faculty members are given a reduction of about 50% in the number of APPE student assignments during their first year to provide time for practice site development (approximately one semester without students). New tenure track faculty are given one semester without teaching so that they have time to initiate research, prepare lectures, and develop a practice. (Q6)

The School has been fortunate to secure additional faculty and staff resources as described above and have a relatively low turn over since the last accreditation reason (Appendices 24.3.1, 24.4.1, and 24.7.1). Most of our faculty resource determinations are based on needs for classroom/laboratory instruction, experiential education, and alignment of faculty with specific content expertise, research areas, and initiatives. The Dean also examines faculty student ratio data from private pharmacy schools and our peer matchmates. With regard to experiential education, we have developed models to determine needs for full-time, co-funded and adjunct faculty based on total and required APPEs. Our APPE preceptors have adjunct faculty appointments. The school dean is responsible for faculty and staff capacity planning. Several years ago the university migrated from a centralized budget model to a Responsibility Center Management (RCM) model, which gives academic units more localized autonomy to balance student tuition revenue and faculty/staff support needs (See standard 30). Part-time faculty are hired when additional expertise is needed (e.g. pharmacy law) or in cases of unfilled vacancy or leave; however majority of our didactic curriculum is delivered by the full-time faculty. (Q3,4)

Survey data indicate an overall positive trajectory in faculty perception that the program’s resources can accommodate present student enrollment, with 84% of faculty in 2014 agreeing with this statement (national average – 76.4%). This marks the highest level of agreement on this particular question in the past 5 years. According to the 2014 data, 59% of faculty agree that they have adequate support staff resources (highest agreement since 2009), however this assessment still falls below the national average of 75% agreement. A new staff member (0.5 FTE) has been added since the 2014 faculty survey administration and we will continue to monitor faculty faculty perceptions of staff resources. (Q8)

The expansion of the leadership team and the balance of junior, mid-level, and senior faculty allows for succession planning. When Dean Reynolds was asked to step into the Vice Provost position in 2014, Dr. Zgarrick was able to step into the Acting Dean position, while Dr. Devlin stepped into the Acting Chair position for DPHSS. Faculty rather than administrators are in charge of the Academic Affairs, Assessment, and Curriculum committees to ensure that we build expertise in these areas as part of succession planning. The SWOT analysis revealed the need to begin planning for the succession of several pharmacology faculty who are likely to retire in the next several years. (Q4)

Faculty need assessments are routinely conducted to determine what faculty numbers and distributions are needed to provide a quality student didactic and clinical experience; meet the content requirements of the PharmD, graduate, and inter-professional programs; fulfill clinical service commitments; advance
the scholarship of teaching learning and the funded research enterprise; and contribute to the scientific, clinical, and health systems mission of the profession of pharmacy and its related disciplines. Service commitments, advising needs (both student groups and individual students through the portfolio process) and mentoring needs are also considered. The School encourages faculty to be involved in professional associations and values leadership involvement at the regional and national levels. (Q1)

Workload assessments are conducted annually in both departments and involve faculty/chair individualized meetings to discuss the workload profile, which is required to be completed at the beginning of every calendar year (See Standard 26). Didactic and experiential teaching loads vary depending on the nature of an appointment and are analyzed for each faculty member and weighted with service and scholarship obligations in an effort to balance curricular needs with faculty professional. As a whole faculty spend about half of their time on teaching in the PharmD professional courses and research activities, split equally, with the rest of the time spent on service, practice, mentoring and advising and other activities (See Table under Documents and Data). Faculty are also provided with workload flexibility and encouraged to participate in professional events. Faculty survey data reveals that although there is room for improvement on question “My allocation of effort has been clearly stated”, the 78% of agreement is similar to national comparison. Majority of the faculty also feel they spent an appropriate amount of their effort on teaching and service (data similar to national), but too much time on service (35% of school faculty chose “too much” vs. 22% nationally) (Q1,2,8).

4. College or School's Final Self-Evaluation

☐ Compliant  ☐ Compliant with Monitoring  ☐ Partially Compliant  ☐ Non-Compliant

5. Recommended Monitoring

(School comments begin here)
The college or school must have qualified faculty and staff who, individually and collectively, are committed to its mission and goals and respect their colleagues and students. Faculty must possess the required professional and academic expertise, have contemporary knowledge and abilities in current educational philosophy and techniques, and be committed to the advancement of the profession and the pursuit of research and other scholarly activities. Faculty whose responsibilities include the practice of pharmacy must satisfy all professional licensure requirements that apply to their practice. The college or school must foster the development of its faculty and staff, commensurate with their responsibilities in the program.

### 2. College or School's Self-Assessment

<table>
<thead>
<tr>
<th>Description</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>The college or school has qualified faculty who, individually and collectively, are committed to its mission and goals and respect their colleagues and students.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The college or school has qualified staff who, individually and collectively, are committed to its mission and goals and respect their colleagues and students.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Faculty possess the required professional and academic expertise, have contemporary knowledge and abilities in current educational philosophy and techniques, and are committed to the advancement of the profession and the pursuit of research and other scholarly activities.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Faculty generate and disseminate knowledge through scholarship. Scholarship by faculty members, including the scholarship of teaching, is evident and demonstrated by productive research and other scholarly activities.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Faculty whose responsibilities include the practice of pharmacy satisfy all professional licensure requirements that apply to their practice.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Pharmacy practice faculty possess additional professional training (residency, fellowship, or equivalent experience)</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Pharmacy practice faculty either have or are working toward additional credentials (for example, specialty certification) relevant to their practice and teaching responsibilities.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The college or school ensures that policies and procedures for faculty recruitment, promotion, tenure (if applicable), remuneration and retention are established and applied in a consistent manner.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The college or school ensures that the faculty composition, including any contributions from internal and external relationships, encompasses the relevant disciplines within the biomedical, pharmaceutical, social/behavioral/administrative, and clinical sciences to meet the education and research needs as defined by the mission statement.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Faculty, regardless of their discipline, have or are developing a conceptual understanding of current and proposed future pharmacy practice in a variety of settings.</td>
<td>Needs Improvement</td>
</tr>
<tr>
<td>Faculty members have the capability and continued commitment to be effective teachers. Effective teaching requires knowledge of the discipline, effective education, and research.</td>
<td>Satisfactory</td>
</tr>
</tbody>
</table>
communication skills, and an understanding of pedagogy, including construction and delivery of the curriculum, and a commitment to learning outcomes assessment.

| The college or school provides, or is affiliated with institutions that provide, postgraduate education and training, including accredited residency and fellowship programs. | Satisfactory |
| The college or school fosters an environment that encourages contributions by the faculty to the development and transmission of knowledge. | Satisfactory |

3. College or School's Comments on the Standard

**Focused Questions**

☑ The process used to assess and confirm the credentials of faculty and staff, and to assure that faculty credentials are appropriate for their assigned teaching responsibilities

☑ How the college or school ensures that the faculty composition, including any contributions from internal and external relationships, encompasses the relevant disciplines within the biomedical, pharmaceutical, social/behavioral/administrative, and clinical sciences to meet the education and research needs as defined by the mission statement

☑ How the college or school ensures that faculty members, regardless of their discipline, have a conceptual understanding of current and future trends in the scientific basis of the biomedical, pharmaceutical social/administrative and clinical sciences

☑ How the college or school ensures that faculty members, regardless of their discipline, have a conceptual understanding of contemporary pharmacy practice and future trends in a variety of settings

☑ A description of the college or school's policy or expectations regarding research productivity for faculty, including timeline for new faculty

☑ Evidence that faculty are generating and disseminating knowledge through productive research and scholarship, including the scholarship of teaching

☑ A description, if applicable, of how faculty, instructors, and teaching assistants involved in distance education are qualified through training or experience to manage, teach, evaluate, and grade students engaged in distance learning

☑ How the college or school provides, or is affiliated with institutions that provide, postgraduate education and training, including accredited residencies and fellowship programs

☑ How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard

☑ Any other notable achievements, innovations or quality improvements

☑ Interpretation of the data from the applicable AACP standardized survey questions, especially notable differences from national or peer group norms.

(School comments begin here)

The process starts with an annual faculty needs assessment to ensure that faculty composition encompasses relevant disciplines based on the PharmD curriculum, other SOP degree programs, and the mission of the School. This process is described in Standard 24. Based on these identified needs, SOP faculty are recruited through national searches for positions authorized by the provost and college dean. Faculty search committees are appointed by the department chair. They are responsible for

Northeastern University / Bouve College of Health Sciences, School of Pharma
generating the position description and recruitment plan in consultation with the chair, department faculty and
the college’s associate dean for faculty affairs and dean. (See more at Faculty recruitment policies/
procedures). The search committee works with the department chair and SOP dean to assure that the
faculty credentials are appropriate for their assigned teaching responsibilities. The Human Resources
Department confirms prospective faculty degrees prior to hire (See Credential verification processes).
The University’s search process, diversity considerations, and credential verification process are further
described in the two embedded web links above. University Policies and Procedures on Tenure and
Appointment are listed in Faculty Handbook (Appendix 25.1.1). The policies specific for Bouve College
of Health Sciences in the areas of search approval, search process, hiring process, and onboarding
process are in Appendix 25.6.1. (Q1,2)

A similar annual needs assessment is conducted for staff (professional or support) who are hired with
the help of HRD and under the supervision of the Assistant Director for Operations. Depending on
the position, minimum degree and qualification requirements for staff vary. Currently, the majority of
our support staff have associate or bachelor’s degrees and several professional staff members have
master’s level degrees. (1,2)

The School has been able to recruit and retain exceptional faculty (Appendix 25.2.1). All 19 faculty
members in the Department of Pharmaceutical Sciences (DPS) have PhDs and many have post-doctoral
fellowship training. In the Department of Pharmacy and Health Systems Sciences (DPHSS), 27 of 37
faculty have clinical residencies or fellowships and 23 provide medication therapy management services
at various practice sites. Overall, the School has 37 faculty who are licensed pharmacists. Recruitment
efforts are summarized in Appendix 25.6.2 (Q2)

Our faculty are well balanced in terms of disciplines, academic ranks and years of experience in
academia to ensure the achievement of school’s mission and delivery of the curriculum (Standard
24). When faculty are recruited, we consider the potential of a faculty candidate to establish a strong
research and scholarship track record and to collaborate both within the school and the college/
university. We have a particularly strong group of ambulatory care practitioners who provide services
at urban community health centers. As a group they have established an Ambulatory Care Institute in
response to a strategic initiative of the DPHSS. The current DPHSS strategic plan reflects the desire
to continue this collaborative effort and joint research projects. Additionally, our Social Administrative
Sciences and Pharmaceutical Sciences groups are very strong in their research productivity. Our
scientists and clinicians in both departments consistently collaborate within the school, college, and
university and also have a number of national and international collaborators. (See Appendix 25.6.3 for
representative examples of collaborations). (Q2)

When new faculty arrive on campus, a department-specific mentoring program is in place for tenure
track faculty (See standard 26). College-wide mentoring programs are also available for tenure track
faculty. However, at present, a parallel mentoring program is not in place for non-tenure track faculty at
the college or university level. DPHSS has established a mentoring program for non-tenure track clinical
faculty to fill this void (Standard 26). (Q9,10)

Faculty development programs are provided at the department, SOP, Bouve, and University-level and
are offered to both tenure and non-tenure faculty. A compendium of the 2013-2014 programs is included
in Standard 26. Additionally, during the last five years, faculty members in the Department of Pharmacy
and Health System Sciences have taken advantage of the University’s generous tuition-free policies
and have enrolled in, and obtained degrees from, the EdD (n=2), MEd (n=4), and MPH (n=1) programs. Fifteen clinical faculty have achieved board specialty certification. (Q2)

However, SOP faculty development programs to “ensure that faculty members have a conceptual understanding of 1) current and future trends in the scientific basis of the biomedical, pharmaceutical, social/administrative, and clinical sciences and 2) contemporary pharmacy practice and future trends in a variety of settings” are still works-in-progress. Currently faculty from both departments are invited to attend seminars, journal clubs and colloquia; however attendance across departments is poor. DPS hosts an annual research and scholarship day with guest speakers and poster sessions. Many of the faculty and students participate in the university Research, Innovation, and Scholarship Expo and learn about each other’s research. Among the methods discussed by the faculty development committee as well as the faculty as a whole to facilitate additional cross-pollination of the science and practice of pharmacy are: one-hour seminars that would pair cutting-edge science and practice topics; a designated time at each SOP faculty meeting for discussions of these topics; a day set aside for pharmaceutical science faculty to update their DPHSS colleagues concerning recent scientific advances within their laboratories, for DPHSS faculty to update clinical and pharmacy systems topics, and for all to explore the future of the profession of pharmacy in the new world created by expanded health care coverage and changing delivery systems; a library of readings appropriate for these topics; and podcasts. The faculty development committee will present a plan for consideration at a late spring SOP faculty meeting. (Q 3, 4)

All SOP faculty (tenured, tenure-track, and clinical) are expected to participate in the generation of new knowledge; this can include research and/or scholarship. The type of scholarship/research and the amount of productivity is dependent upon the department and type of appointment. Tenure track faculty in both departments are expected to have publications and an externally funded research program prior to tenure consideration. Tenure track faculty have annual reviews, a high stakes third year review, and then tenure decision in the sixth year (Appendix 25.3.1). All clinical non-tenure faculty have expectations for scholarship, which is on average 10% of their workload. The definition of scholarship in the DPHSS is broad and includes research involving both practice and teaching. The new strategic plan for DPHSS has a strategic objective focused on further defining scholarship and engaging all types of faculty and students in research. Peer-reviewed presentations and publications are a perquisite for promotion within the clinical ranks. Clinical faculty can request promotion under Bouve College Clinical Promotion Policy (Appendix 25.6.4). (Q5)

These SOP processes of recruiting, hiring, mentoring, and faculty development have led to a highly productive faculty. Over the past three years, the SOP faculty has produced 522 peer-reviewed publications and 68 books/chapters covering biomedical, pharmaceutical, social/behavioral/administrative, and clinical sciences as well as the scholarship of teaching and learning. Over the past year, we have presented 159 invited presentations and 200 research presentations/posters and received 36 external mural grants (data included under Standard 26 documents and data). Both departments closely monitor research productivity and prepare annual reports (Appendices 25.6.5-6). Our extramural funding also remains consistently strong ($10,268,044 the past fiscal year); it represents approximately 50% of the SOP total yearly revenue (See standard 30). AACP Grant Search Database reports that the overall 2013 grant funding for our school for 2013 was $8,272,363 which places us in #18 among all schools/colleges of pharmacy and #1 among private schools of pharmacy (Appendix 25.6.7).

In addition to the productivity listed above, the SOP has also been successful in expanding our residency and fellowship programs. As compared to our 2009 self study, the number of residency and fellowship
positions has grown tremendously. Additionally we now offer a joint PharmD/MPH degree; our first student enrolled in this program in Spring 2015. (Q 8,10)

<table>
<thead>
<tr>
<th></th>
<th>2009</th>
<th>2014-2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residencies</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Fellowships</td>
<td>1</td>
<td>13</td>
</tr>
</tbody>
</table>

Based on AAMS survey results, 78.2% of our faculty strongly agree/agree that the SOP uses an effective recruitment process; this is similar to the national average and to our 2009 results. Sixty-three percent of faculty agree/strongly agree that they receive adequate guidance on career development. While this item has improved from 40% in 2009, in 2014 it is nearly 10% below the national average.

Faculty also feel more positive about the funds available for professional development, rising from 57.2% to 78.2% and similar to the national average. Our preceptors strongly agree/agree that they are provided with the needed support from the Office of Experiential Education. Over 90% of our alumni and students regard our faculty as effective teachers and positive role models. (Q11)

4. College or School's Final Self-Evaluation

5. Recommended Monitoring

(School comments begin here)

We need to continue to work to ensure that faculty members have a conceptual understanding of 1) current and future trends in the scientific basis of the biomedical, pharmaceutical, social/administrative, and clinical sciences and 2) contemporary pharmacy practice and future trends in a variety of settings.
26. Faculty and Staff Continuing Professional Development and Performance Review

The college or school must have an effective continuing professional development program for full-time, part-time, and voluntary faculty and staff consistent with their responsibilities. The college or school must review the performance of faculty and staff on a regular basis. Criteria for performance review must be commensurate with the responsibilities of the faculty and staff in the professional degree program.

2. College or School's Self-Assessment

<table>
<thead>
<tr>
<th>Description</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>The college or school fosters the development of its faculty and has an effective continuing professional and career development program for full-time, part-time, and voluntary faculty consistent with their responsibilities.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The college or school fosters the development of its staff and has an effective continuing professional and career development program for full-time and part-time staff consistent with their responsibilities.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Faculty and staff are assisted in goal setting by their administrative reporting authority</td>
<td>Needs Improvement</td>
</tr>
<tr>
<td>The college or school reviews the performance of faculty and staff on a regular basis.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Criteria for performance review are commensurate with the responsibilities of the faculty and staff in the professional degree program.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The college or school has or provides support for programs and activities for faculty and preceptor continuing professional development as educators, researchers, scholars, and practitioners commensurate with their responsibilities in the program.</td>
<td>Needs Improvement</td>
</tr>
<tr>
<td>Faculty receive adequate guidance and support on career development.</td>
<td>Needs Improvement</td>
</tr>
<tr>
<td>Faculty are able to attend one or more scientific or professional association meetings per year.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Faculty development programs are available to enhance a faculty member's academic skills and abilities.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The performance criteria for faculty are clear.</td>
<td>Needs Improvement</td>
</tr>
<tr>
<td>Expectations on faculty for teaching, scholarship and service are appropriate and commensurate with academic and professional development.</td>
<td>Satisfactory</td>
</tr>
</tbody>
</table>

3. College or School's Comments on the Standard

Focused Questions

☑ A description of the performance review process for full-time, part-time and voluntary faculty (including preceptors) and staff

☐ A description of the relationship between faculty, preceptor, and staff continuing professional development activities and their performance review

☑ A description of faculty development programs and opportunities offered or supported by the college or school

☑ A description of staff development programs and opportunities offered or supported by the college or school
How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard

Any other notable achievements, innovations or quality improvements

Interpretation of the data from the applicable AACP standardized survey questions, especially notable differences from national or peer group norms.

(School comments begin here)

The School Dean and the Chairs of the Department of Pharmaceutical Sciences (DPS) and the Department of Pharmacy and Health Systems Sciences (DPHSS) are appointed for a five-year term. Chairs and Deans are evaluated annually by the College Dean. In the third year of the administrator's term, a performance evaluation is conducted by a committee of peers. Three faculty are appointed to the committee by the Faculty Senate’s Administrative Evaluation Oversight Committee (AEOC) and 2 members are appointed by the provost or appropriate senior vice president. The committee seeks evaluations from administrators, unit faculty, students and other appropriate groups. The report from the committee is sent to the AEOC and it, in turn, provides the approved full report to the Senate Agenda Committee, the administrator's supervisor, and the administrator, and to faculty from the evaluated unit.

The School evaluates all faculty and staff on an annual basis. Both departments conduct performance reviews based on department-specific criteria with input from peers, administrators and students. Faculty performance evaluations are mandated by the university, the College, and the School.

The annual review process is based on the calendar year and begins with completion of a Faculty Activity Report (Appendices 26.2.1-2) each January. Faculty set goals for the upcoming year in the areas of teaching, research, and service. The process is responsive to the individual talents and changing needs of tenured, tenure-track, and clinical faculty who need to balance teaching, research, university service, and clinical service roles. In December, each faculty member completes Performance Evaluation Report (Appendices 26.2.3-4) in which faculty list their accomplishments and reflect on set goals. A significant concern exists for faculty with 8 months appointments regarding teaching or precepting assignments during outside of this period.

In both departments, an elected faculty committee conducts a peer review of each faculty member based on the materials submitted. DPHSS faculty are required to participate in the Peer Evaluation Process (Appendix 26.3.1); however the evaluation itself is formative and faculty are only asked to reflect on the feedback they received. In 2011, our peer evaluation program was recognized with the AACP Excellence in Assessment Award and has been adopted by several other schools of pharmacy.

DPS faculty do not participate in mandatory peer evaluations but senior faculty evaluate junior faculty teaching as part of tenure review requirements. Student assessment of faculty teaching is provided by a university supported standard survey instrument that asks students to evaluate the effectiveness of the instructor(s), the amount learned, and the difficulty of the content in each course (See standard 3).

Results of these evaluations and preceptor evaluations for clinical faculty are submitted as part of the performance review. The scores and recommendations of the Committee and the Chair are combined into a single report, and that score is a weighted average of 67%/33% split, respectively. This report is then sent to the School Dean for approval before being submitted to the College Dean.

During the last accreditation cycle, faculty identified a need for more clear and explicit merit performance criteria, as well as more effective feedback. Modifications have been made to the merit review document.
including a formal assessment for the clinical faculty by the practice site. Faculty perception of the merit review process has remained consistent with some improvement on AACP Faculty survey items 13, 15, and 18. However, the 2013 and 2014 data seemed to indicate that the merit review and feedback processes could still be improved; in particular, there were concerns in the DPS. Similarly, faculty survey has shown an improvement in faculty perceptions on the question “my performance criteria are explicit and clear” from 2009 through 2013. However, in 2014 our trend for this question raised concerns from the assessment committee that have been communicated to the leadership team. Up to 30% of the faculty did not feel that the criteria for their performance assessment is consistent with their responsibilities. These concerns have been discussed by the school’s leadership and recommendations will be formulated. (Q7)

APPE preceptors are assessed under the following situations: 1) New Site: the site and preceptor selection criteria are used to assess willingness to serve as a teaching site and how frequently the site might be utilized is determined; 2) New preceptor orientation is currently done at the practice sites or via a teleconference due to a lack of funds for on-campus group training sessions; 3) 25% of sites are visited each year through a random process; 4) If preceptors or students reveal challenges during an APPE, the Office of Experiential Education (OEE) will respond immediately to facilitate corrective actions; and 5) Discussions with preceptors and/or site visits will be triggered should negative student reviews of APPE preceptors or sites warrant a response. During the 2014-2015 academic year, most local sites were visited by the OEE to determine the site’s preferred site visit schedule. Preceptor evaluations are available via E*Value portal. The preceptors’ perceptions regarding their performance criteria have improved since 2009; however there is room for additional improvement. (Q1, 7)

While IPPE preceptors are not currently formally evaluated by the OEE, students provide feedback at the conclusion of their IPPEs on the workload level, opportunities for learning, and level of responsibility delegated at their site. Students are asked to include how their experience contributed to their academic, professional, and personal development. As the OEE and Assessment Committee will work on reviewing and updating evaluation rubrics to ensure compliance with 2016 Standards, we plan to formalize student evaluations of IPPE experience/preceptor. (Q1, 6)

Every staff member/manager participates in the performance management process. Both individual and team meetings occur regularly throughout the year to discuss relevant topics to administrative jobs, as well as ongoing individual performance. Details on the performance management process as rolled out by Northeastern can be found on the HRM website at the following link. (Q1)

Support programs for continued success and advancement of faculty are provided by the university and the school; a representative list of opportunities during the 2013-2014 year is in Appendix 26.1.1. The university provides a new faculty orientation to instruct faculty on operational procedures and reviews the services available to faculty. Additional meetings include mentoring events and a workshop that guide new faculty through the tenure/promotion process. One way the school helps faculty to achieve their goals is through the mentoring program. Each tenure-track faculty member is paired with a more senior faculty mentor. In addition, DPHSS has made recent improvements to the mentoring processes for clinical faculty (Appendix 26.3.2). A survey of 5 junior faculty and their 5 mentors using validated instruments was performed in 2014 and revealed that the process is working; however improvements can be made by assigning mentors to all faculty regardless of years of experience or academic rank. In addition, the university requires yearly reviews of tenure-track faculty by each department’s Tenure and Promotion Committee (TPC) to provide feedback about individual progress toward tenure. The 3rd-year review is especially important since it occurs at the mid-point of the probationary period and is reviewed.
by the the TPC and College Dean. For each review, the faculty member prepares a dossier of his/her activities in research, teaching, and service and formally presents it to the TPC. The committee then provides a formal evaluation letter to the faculty member. (Q4-6)

The university actively supports quality instruction and runs numerous workshops each year to assist faculty in improving their teaching effectiveness. In addition, the university provides up to 9 credits of free tuition each quarter for faculty and staff who wish to obtain additional educational or graduate degree training at the institution. Four faculty obtained their MEd and 2 EdD degrees since the last self-study and one is working on her MPH degree. Sabbatical leaves are supported by the university for tenured faculty (Q3,4) on page

The DPHSS reimburses faculty for attendance at professional meetings to present their research; however $500 are available for each faculty development regardless of meeting participation. The DPS provides an annual travel stipend to faculty presenting their research at national meetings and encourages faculty to build additional travel funds into their grants. (Q4)

The OEE trains new preceptors via two mechanisms: site visits (for local programs) or conference calls to review the expectations of the APPE program and coordinating continuing education programs through the regional experiential education consortium. See Appendix 26.1.2 for development offered by OEE. Preceptor development continues to be a challenge for the school. While our efforts have demonstrated significant improvement with preceptor satisfaction of available training on the 2012 survey, the satisfaction declined again in 2014. (Q3)

Ongoing staff development programs are summarized in Appendix 26.1.3. Professional staff have had the opportunity to attend the AACP Annual meeting. Notably, most of our staff take full advantage of employee tuition benefit. Two employees recently earned their Masters' degree, three others are enrolled in certificate programs and/or are taking classes. (Q4,6)

4. College or School's Final Self-Evaluation

☐ Compliant  ☑ Compliant with Monitoring  ☐ Partially Compliant  ☐ Non-Compliant

5. Recommended Monitoring

(School comments begin here)

Faculty on 8 month appointment have expressed significant concern regarding teaching or precepting assignments during outside of this period. This needs to be addressed by the chairs and the dean and considered when assigning workload. We will continue to work with the leadership on enhancing mentoring programs and ensuring faculty satisfaction with the feedback they receive. DPHSS's new strategic plan contains a priority that will help with faculty mentoring and establishing better guidelines for promotion. Additionally, OEE needs continue to enhance preceptor development activities and monitor the results of the AACP preceptor survey
27. Physical Facilities

The college or school must have adequate and appropriate physical facilities to achieve its mission and goals. The physical facilities must facilitate interaction among administration, faculty, and students. The physical facilities must meet legal standards and be safe, well maintained, and adequately equipped.

2. College or School's Self-Assessment

<table>
<thead>
<tr>
<th>Description</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>The college or school has adequate and appropriate physical facilities to achieve its mission and goals.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The physical facilities facilitate interaction among administration, faculty, and students.</td>
<td>Needs Improvement</td>
</tr>
<tr>
<td>The physical facilities meet legal standards and are safe, well maintained, and adequately equipped.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Physical facilities provide a safe and comfortable environment for teaching and learning.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>For colleges and schools that use animals in their professional course work or research, proper and adequate animal facilities are maintained in accordance with acceptable standards for animal facilities.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Animal use conforms to Institutional Animal Care and Use Committee (or equivalent) requirements. Accreditation of the laboratory animal care and use program is encouraged.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Space within colleges and schools dedicated for human investigation comply with state and federal statutes and regulations.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>All human investigations performed by college or school faculty, whether performed at the college or school or elsewhere, are approved by the appropriate Institutional Review Board(s) and meet state and federal research standards.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Students, faculty, preceptors, instructors, and teaching assistants have access to appropriate resources to ensure equivalent program outcomes across all program pathways, including access to technical, design, and production services to support the college or school's various program initiatives.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Commensurate with the numbers of students, faculty and staff, and the activities and services provided, branch or distance campuses have or have access to physical facilities of comparable quality and functionality as those of the main campus.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Faculty have office space of adequate size and with an appropriate level of privacy.</td>
<td>Needs Improvement</td>
</tr>
<tr>
<td>Faculty have adequate laboratory resources and space for their research and scholarship needs.</td>
<td>Needs Improvement</td>
</tr>
<tr>
<td>Computer resources are adequate.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Laboratories and simulated environments (e.g. model pharmacy) are adequate.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Facilities encourage interprofessional interactions (e.g., simulation laboratories)</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Access to quiet and collaborative study areas is adequate.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Common space for relaxation, professional organization activities and events, and/or socialization is adequate.</td>
<td>Satisfactory</td>
</tr>
</tbody>
</table>
### 3. College or School's Comments on the Standard

**Focused Questions**

- A description of physical facilities, including available square footage for all areas outlined by research facilities, lecture halls, offices, laboratories, etc.
- A description of the equipment for the facilities for educational activities, including simulation areas
- A description of the equipment for the facilities for research activities
- A description of facility resources available for student organizations
- A description of facilities available for student studying, including computer and printing capabilities
- How the facilities encourage and support interprofessional interactions
- How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard
- Any other notable achievements, innovations or quality improvements
- Interpretation of the data from the applicable AACP standardized survey questions, especially notable differences from national or peer group norms

(School comments begin here)

The SOP has necessary facility resources in the form of classrooms to provide didactic education to PharmD students. The scheduling area of the University Office of the Registrar is responsible for the placement of classes into the most appropriate rooms in the University’s classroom inventory. The goal is to schedule classroom space to match the needs of faculty and students with the resources available and to accomplish this in the most efficient, consistent, equitable, and accurate manner possible. All classroom scheduling is done using the scheduling software. Rooms are assigned by size utilizing the max allowed information provided by the department/college. When classroom space is unavailable on the day/time or for the class size stipulated, the scheduling area will contact the college/department and request the necessary changes to room the class. Classroom utilization is very high especially during peak times. The university has developed standard meeting patterns in order to make the most efficient and effective use of instructional days and classroom space. For more information on meeting patterns click [here](#). (Q1)

**Information Technology Services (ITS)** is the central provider of technology infrastructure, services and applications for students, faculty and staff at Northeastern University. From providing the myNEU portal to secure networks to training on critical applications, ITS partners with stakeholders across the university to equip students, faculty and staff with the tools necessary to achieve academic excellence. The division serves as a technology partner with the university, evaluating and delivering innovative and collaborative solutions that promote and advance teaching, learning, research, and support for the Northeastern community. (Q2)

All classrooms at Northeastern are equipped with technology necessary to deliver multi-media presentation. Specific equipment available in a classroom is based upon the size of the classroom. At a minimum all classrooms are equipped with an LCD display or projector and all larger classrooms (>24 seats) are equipped with overhead projectors and instructor station computers. Additional information is available [here](#). **Academic Technology Services (ATS)**, works with the faculty to provide technology that facilitates teaching and learning as well as student engagement. Currently, Blackboard Learning
Management System is used for all courses, and SOP faculty routinely use Turning Point classroom response system, and Tegrity lecture capture system that allows students to listen and view lectures after class. While the facilities are modern, the school has communicated with ATS our needs for more flexible classroom space and power source at each seat. (Q2)

The Arnold S. Goldstein Interprofessional Laboratory Suite is a state-of-art simulation facility that opened its doors in 2013. This lab allows students from the 8 health professions programs in BCHS learn about, from and with each other to improve health outcomes. Interprofessional simulations focus on developing core competencies for interprofessional collaborative practice and promoting a team-based approach to health care delivery. The 2200sq/ft space houses transformable state of the art labs and debriefing rooms. Each lab can be set up as a variety of practice environments including, hospital rooms, operating rooms, exam rooms, office space, conference room, home care settings or even a dorm room. Each lab contains video and audio capture technology, powered by EMS’s SimulationIQ Enterprise simulation management system, used to record student experiences as they interact with the latest high-fidelity human patient simulators (4 SimMan 3G, 2 SimMoms, 1 SimJunior, 1 SimBaby, 1 SimNewB), patient actors, faculty and other students. Student’s recorded simulation experiences are played back and analyzed during structured debriefing sessions. Debriefing is a vital component of simulation and a critical piece that drives heightened student learning. (Q6,8)

The Pharmacy program has sufficient lab space to deliver its curriculum (4796 Sq. Feet; Appendix 27.5.1). Pharmaceutics laboratories are taught in the wet lab shared with biomedical sciences. While this is not ideal it does provide the space necessary to deliver the laboratory sessions. A dedicated school of pharmacy lab (25 Behrakis Building) is used to deliver Comprehensive Disease Management Skills Lab courses as well as communication skills lab courses. A small amount of the space was lost in the creation of the Goldstein Simulation Center and the existing space needs renovation. The instructors teaching in these labs will be putting together a proposal to reconfigure this space to be more flexible so that the lab can be used for a variety of purposes and keep up to date with the evolving needs to preparing future pharmacists. (Q1)

Students have sufficient facilities for individual and small group study within the University Library, which has been recently renovated (See Standard 29). The campus and dormitories have many areas where students can gather to study in groups or find quiet environment to study alone. Printing services plan is described at http://www.northeastern.edu/its/services/printing-plan/ and provides students with ability to select any network printer on campus (many are located in classroom buildings) and receive their printout by swiping their student ID. SOP has a computer requirement for pharmacy students (Appendix 27.5.2) and students have access to many computer labs on campus (Q5).

Recent graduating student surveys show that students feel safe on campus. Over 95% agree that classrooms, laboratories, study areas and non classroom areas were conductive to learning and met their needs. Responses to all relevant questions were extremely positive and met or exceeded national averages. (Q9)

Students participate in a wide variety of groups and organizations. These groups and organizations are housed in the Curry Student Center. NU Center for Student Involvement provides support for professional student organizations from scheduling rooms and events, managing finances, and providing leadership development. (Q4)

In 2012, the School moved into a 33,473 sq. foot renovated space at 140 The Fenway (TF) since the last self-study. The building offers a home location for the school of pharmacy Dean’s Office, faculty offices,
conference rooms, and research laboratories for its faculty and research centers. While the majority of the research labs have moved, our Center for Drug Discovery and NE Inflammation & Tissue Protection Institute retained its labs in the Mugar Building (Appendix 27.5.1). The list of equipment available to the school is in Appendix 27.5.2 (Q1,3,8).

Since the move to the new building faculty perceptions have improved regarding facilities enabling out-of-class interaction with the students; however, overall agreement with this is still significantly below national comparison. The logistics of our campus with many classroom buildings make it difficult for faculty and students to occupy the same space, however, the conference rooms in 140 TF allow faculty to schedule meetings and office hours. Since the move more faculty disagree that they have adequate office space and this sentiment comes from the DPHSS where most clinical faculty share office space (large space with cubicle design) which makes it more challenging to work without distractions or meet with students. Finally, while faculty perceptions regarding laboratory resources and space have improved and are similar to national data, compared to our peer research-intensive institutions there is still room for improvement. All faculty are in agreement about the safety of the campus and most feel that there are sufficient program resources to accommodate present student enrollment and the school has appropriate physical facilities and computer resources to allow them to fulfill their responsibilities (data better than national comparison). (Q9)

Animal research and coursework at Northeastern is regulated by the Division of Laboratory Animal Medicine. Northeastern University’s animal care and use program and housing facilities are fully accredited by AAALAC, International. AAALAC accreditation is the considered essential for animal care and use programs because it confirms that the institution’s program is of the highest quality and meets the standards set by the Guide for the Care and Use of Laboratory Animals. Northeastern University is also an assured institution with the Office of Laboratory Animal Welfare and is registered by the United States Department of Agriculture (USDA). (Q1,3,7)

Northeastern University’s animal care facilities house primarily mice, rats, hamsters, voles, and occasionally other larger species used by our researchers. The use of all live vertebrate animals used at Northeastern University must be part of approved animal care and use protocols. Each facility is comprised of multiple animal housing rooms, facility support space, and procedure rooms where researchers work with their animals. Each facility is staffed by trained DLAM animal care technicians that take care of the husbandry of the animals in their care as well as maintain the facilities. (Q1,3,7)

The Office of Human Subject Research Protection educates members of the university community about the ethical principles guiding human subject research, provides assistance to students, faculty and staff in obtaining approval for teaching and research activities under those guidelines, ensures university-wide compliance with federal, state and university statutes and regulations relating to the protection of human subjects, and provides central administration to the Institutional Review Board (IRB) and serves as the primary point of contact for all IRB-related issues. (Q7)

4. College or School’s Final Self-Evaluation

| ☑ Compliant | ☐ Compliant with Monitoring | ☐ Partially Compliant | ☐ Non-Compliant |

5. Recommended Monitoring

(School comments begin here)

Northeastern University / Bouve College of Health Sciences, School of Pharma
Continue to monitor faculty perceptions regarding office space and laboratory space and resources.
28. Practice Facilities

To support the introductory and advanced pharmacy practice experiences (required and elective) and to advance collaboratively the patient care services of pharmacy practice experience sites (where applicable), the college or school must establish and implement criteria for the selection of an adequate number and mix of practice facilities and secure written agreements with the practice facilities.

2. College or School's Self-Assessment

<table>
<thead>
<tr>
<th>Statement</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>The college or school collaboratively advances the patient-care services of its practice sites.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The college or school establishes and implements criteria for the selection of an adequate number and mix of practice facilities.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The college or school establishes and implements criteria to secure written agreements with the practice facilities.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Before assigning students to a practice site, the college or school screens potential sites and preceptors to ensure that the educational experience would afford students the opportunity to achieve the required competencies.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>At a minimum, for all sites for required pharmacy practice experiences and for frequently used sites for elective pharmacy practice experiences, a written affiliation agreement between the site and the college or school is secured before students are placed.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The college or school identifies a diverse mixture of sites for required and elective pharmacy practice experiences.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The college or school has sites that provide students with positive experiences in interprofessional team-based care.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The academic environment at practice sites is favorable for faculty service and teaching.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>There is adequate oversight of practice sites and efficient management and coordination of pharmacy practice experiences.</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>The college or school periodically assesses the quality of sites and preceptors in light of curricular needs and identifies additional sites when needed. The college or school discontinues relationships that do not meet preset quality criteria.</td>
<td>Satisfactory</td>
</tr>
</tbody>
</table>

3. College or School's Comments on the Standard

Focused Questions

- Capacity assessment (surplus or shortage) of the required and elective introductory pharmacy practice experiences (IPPEs) and advanced pharmacy practice experiences (APPEs) sites and preceptors for present and, if applicable, proposed future student enrollment
- Strategies for the ongoing quantitative and qualitative development of sites and preceptors and formalization of affiliation agreements
- How the college or school is collaborating with practice sites to advance patient care services
The Office of Experiential Education (OEE) is responsible for developing, maintaining, assigning and monitoring all IPPE and APPE rotations. Two Co-op Coordinators within the office oversee the IPPE rotations. The APPE rotations are managed by two other individuals within the office. Students are required to complete IPPE rotations in both a community and an institutional setting. All early assurance students have another IPPE opportunity in the setting of their choosing (See Standard 14). Standards for Co-op sites and preceptors are contained in the Cooperative Education Employer Handbook and OEE’s web site (Appendix 28.4.1). This handbook reviews the nature of employing a student-employee and provides general guidelines for cooperative education. Policies and laws pertaining to the student while on their IPPE/co-op are also described. (Q2,4)

Students are required to complete 6 APPE rotations each 6 weeks in length. Four of the 6 rotations are required rotations. They include Community Pharmacy, Internal Medicine, Ambulatory Care, and Health-system. The remaining two rotations are elective rotations. Examples of Health-system rotations include Cardiology, Infectious Disease and Intensive Care. Some examples of elective rotations may include Drug Information, Pharmaceutical Industry, and Teaching. All APPE sites and preceptors must meet defined criteria to be considered to participate (Appendix 28.4.2). Written affiliation agreements for most APPE sites are secured the OEE before students begin their rotation. In few cases, such as government agencies (i.e. CDC), that do not sign affiliation agreements, all necessary paperwork, such as student volunteer service agreements, are completed by the student and OEE as required (Q2,4).

Unlike the APPEs, most IPPEs do not require written agreements because they are governed by direct employer to employee relationships. However, due to the changing employment landscape since the last accreditation visit, some IPPE sites are unable to provide the traditional paid co-op experience but can offer unpaid internship types of experiences. In these instances, an affiliation agreement is executed. In all cases, each IPPE/co-op stakeholder is provided a copy of the cooperative education employer handbook. In addition to this handbook, our co-op advisors work with preceptors to ensure that students receive an educational assessment at the end of IPPE/co-op. This assessment is electronically administered to allow for ease of use. (Q2)

The OEE is charged with an ongoing task to monitor and plan the capacity for experiential sites. Regular discussions with the Dean and the Chair of DPHSS occur to ensure at least a 5% surplus in site availability. (Q1)

For IPPE placements in the fall of 2014 the co-op coordinators are working with 61 sites where 132 students were placed. INSERT 2015 SPRING DATA INTO FINAL DRAFT. In general, the number of sites and preceptors has kept pace with enrollments. In addition to the predominance of IPPE locations in the greater Boston area and Massachusetts, and in response to student interest/need there are numerous sites available throughout the country and internationally. All IPPE preceptors are contacted
each semester (3 times per year) about availability. The co-op coordinators maintain about 120 active sites and 20-30 additional sites for occasional use. (Q1, Appendix 28.2.1)

According to the AACP graduating student survey our students seem satisfied with the quality of their IPPE. Most (95.2%) either agreed or strongly agreed that their IPPEs were of high quality (national 83.5%). A lower percentage (84.9% vs 87.7% nationally) of students thought the process for assigning these sites was fair. This is probably due to the fact that students compete against each other by going on job interviews in order to secure their IPPE/Co-op placements. (Q7)

For APPEs during the current academic year 2014-15, 204 active sites with 298 primary preceptors will provide experiences for 132.3 students (decimal is reflective of students off cycle). Of the required non-community APPEs (internal medicine, ambulatory care, and health-system), the OEE initially obtained a 31.6% overage to ensure adequate capacity to absorb any preceptor schedule changes throughout the year. By the midpoint of the 2014-15 year, 27 students were displaced and reassigned due to site turnover, preceptor personal leaves, and remediation, with all internal medicine and health system availability reduced to 9 and 7 tentatively remaining slots respectively. With 9 schools of pharmacy in the New England area, it's possible that any unused availability could have been given to another school. Community availability continues to be robust with more than adequate availability. (Q1)

In 2012 the OEE switched software management programs from PEMS to E-value. The software was selected by the Bouve College of Health Sciences to manage all clinical programs (Nursing, PT, PA, Audiology, Counseling and Applied Psych). For pharmacy, it is the primary tool in managing the APPE program, from scheduling, evaluation, student and preceptor tracking, and reporting. The placement or “match” piece was an improvement over the last software. The OEE annually reviews APPE placement results to serve as a basis for developing APPE projections for subsequent years. During the 2013-14 academic year 95.7% of placements matched with students’ first, second or third preference for each rotation, most recently during the 2014-15 academic year, 97.0% of APPE placements were matched with students’ first, second, or third preference. For the upcoming 2015-16 cycle, this number was 95.3%. Students seem to be pleased with this process as seen in the graduating students survey where 91.7% (89.4% nationally) agreed or strongly agreed with the statement that the process for assigning the APPE was fair. (Q5-7)

Our school is fortunate to be able to take advantage of the robust diversity of healthcare facilities that the city of Boston offers. Because the majority of our sites are within the city and the greater Boston metropolitan area, students are able to obtain a variety of experiences with a wide range of patient populations. The school works collaboratively with practice sites to advance patient care services. This is accomplished through our clinical faculty who deliver patient services at hospitals, ambulatory care clinics, and community health centers. One of the ways we advance patient care services at various practice sites is the creation of co-funded positions. We now have 8 of these positions. Additionally, our students provide patient care under the supervision of preceptors. Our school has gathered data on the clinical and economic impact of students during the APPE year and have published the results in AJPE (Appendices 28.6.3-4) (Q1,3,6).

The AACP graduating student survey reveals that 98.6% reported that their pharmacy practice experiences allowed direct interaction with a diverse patient population (national 97.7%) and 100% reported that their pharmacy practice experiences allowed them to collaborate with other healthcare professionals (national 97.7%). Similarly, over 90% of alumni consistently agree that the college/school provided an adequate number and mix of practice facilities for experiential education. (Q5-7)
Fundamental to the development of quality clinical experiences is the development of criteria to guide the selection of sites and preceptors, which is utilized by the Office of Experiential Education (OEE) in the selection process. New preceptor orientation is currently done at the practice sites or via a teleconference due to a lack of funds for on-campus group training sessions. The OEE then continues to maintain a relationship with sites via telephone and on-site visits designed to ensure quality and provide instructional assistance when needed. Preceptors and sites are contacted at least annually to determine their interest in continuing in the program. This contact, at minimum, serves as an opportunity for the school to inquire about expanding or reducing participation for the following academic year. The cooperative education coordinators work with a primary contact at the site work to manage and plan IPPE placements. Site contact may be initiated based on student feedback during a rotation that suggests a challenge is facing either the student or preceptor. OEE site visit policy targets 25% of IPPE/APPE sites to receive an on-site visit annually. If preceptors or students reveal challenges during an APPE/IPPE, the OEE will respond immediately to facilitate corrective actions; and 5) Discussions with preceptors and/or site visits will be triggered should negative student reviews of APPE preceptors or sites warrant a response. (Q2,4)

The school makes several preceptor development resources available (Appendix 28.6.1). All preceptors have access to the Pharmacist Letter, which offers a number of programs focused on developing preceptor skills. Additionally, the curriculum from the Collaborative Education Institute is also available (Appendix 28.6.2). Resources are also made available via the home page on the E*Value portal (e.g. directions on how to retrieve student evaluations). (Q2) Despite of this, improvements are needed in the development of preceptors to our internal policies. On the AACP preceptor survey, fewer preceptors (67.2% NU vs 78.6% nationally) strongly agreed or agreed with the statement that “I know how to utilize policies of the college/school that deal with harassment and discrimination”. However, preceptor responses on the questions “I receive needed support from the Office of Experiential Education” and “There are adequate facilities and resources at the practice site to precept students” were similar to national data. (Q7)

4. College or School's Final Self-Evaluation

5. Recommended Monitoring

(School comments begin here)

The OEE will continue to work to enhance preceptor development.
29. Library and Educational Resources

The college or school must ensure access for all faculty, preceptors, and students to a library and other educational resources that are sufficient to support the professional degree program and to provide for research and other scholarly activities in accordance with its mission and goals. The college or school must fully incorporate and use these resources in the teaching and learning processes.

2. College or School's Self-Assessment

<table>
<thead>
<tr>
<th>Need</th>
<th>Description</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Needs Improvement</td>
<td>The college or school ensures access for all faculty, preceptors, and students to a library and other educational resources that are sufficient to support the professional degree program and to provide for research and other scholarly activities in accordance with its mission and goals.</td>
<td>Needs Improvement</td>
</tr>
<tr>
<td>Satisfactory</td>
<td>The college or school fully incorporates and uses library and other educational resources in the teaching and learning process.</td>
<td>Satisfactory</td>
</tr>
</tbody>
</table>

3. College or School's Comments on the Standard

Focused Questions

☑ The relationship that exists between the college or school and their primary library, including the level of responsiveness of the Director and staff to faculty, student, staff needs, and any formal mechanisms (e.g., committee assignments) that promote dialog between the college or school and the library.

☑ A description of how the college or school identifies materials for the library collection that are appropriate to its programs and curriculum and assesses how well the collection meets the needs of the faculty and students.

☑ A description of computer technology available to faculty and students.

☑ A description of courses/activities throughout the curriculum in which students learn about the available educational resources.

☑ A description of library orientation and support for faculty and preceptors.

☑ A description of how remote access technologies and mechanisms that promote use of library information from off-campus sites by faculty, students, and preceptors compare with on-campus library resources.

☑ How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard.

☑ Any other notable achievements, innovations or quality improvements.

☑ Interpretation of the data from the applicable AACP standardized survey questions, especially notable differences from national or peer group norms.

(School comments begin here)

The Northeastern University Libraries comprise Snell Library, the African American Institute Library, and the Law School Library. Snell Library is the main library, covering all subject areas, and is a popular destination for undergraduates and graduate students, who refer to it as “Club Snell.” All four floors of the library are now open 24 hours a day, 7 days a week, year-round, for Northeastern affiliates. The Library service desk is staffed close to 100 hours per week. Professional librarians are available in an
adjoining office for walk-in research assistance every day of the week, for a total of 64 hours per week. There are two service desks that offer computer help 24 hours a day, staffed by Information Technology Services. Space and technology renovations, as well as updates to the library systems are described in detail in Appendix 29.6.1 (Q3,7,8).

The University Libraries’ holdings include, as of June 30, 2013: 874,493 printed volumes, 399,488 e-books, 60,270 licensed electronic journals, 9,817 videos, 102,265 printed government publications, and 6,267 linear feet of archival and manuscript collections. Over 90% of the collections budget is now directed toward electronic resources. Through ILiad (interlibrary loan service), faculty, students and staff may request books, articles, book chapters, and other materials not held at Northeastern. Articles and book chapters are received electronically. Electronic document delivery generally takes 24-48 hours, but sometimes a document arrives within a few hours, and some items requested are not available for delivery. This is a very popular service and the School of Pharmacy is among its largest group of users across the university. There is currently no charge for interlibrary loan service, except for copies some (usually older) print dissertations. A full list of available resources is available on library’s web page. Pharmacy specific resources are represented in Appendices 29.3.1 and 29.4.1. (Q7)

The Northeastern University Writing Center has office hours in a space within the library. Staff can now easily refer students who frequently ask for writing assistance to a location a short walk from the unified service desk and the associated reference desk. (Q7)

All library databases have the same content accessible on and off campus. Access and licensing terms are the same for faculty, current students, and preceptors. The only exception is Micromedex, whose vendor, Truven Health Analytics, specifically and emphatically refused to allow access from clinical sites, even for solely educational purposes. (Q6)

**School and library partnership**

A liaison from the library to the School of Pharmacy is available to assess the library’s resources to support proposed class assignments and research projects. The liaison librarian has been working at the Northeastern University Libraries for 13 years and has over 20 years of experience working in libraries. (Q1)

Since 2002, the pharmacy librarian has worked in conjunction with faculty to conduct library training sessions for over 100 students each year in the required Drug Information and Evaluation course (PHMD 6223). In 2014, the pharmacy librarian and the health sciences librarian worked to create ten 5-minute video tutorials for PHMD 6223 in order to facilitate a “flipped classroom” experience, then visited the class to get feedback and answer questions. Librarians who are specialists in Refworks and Endnote software have worked with the Drug Info class to provide instruction and individualized assistance since 2012. The pharmacy librarian is also a RefWorks and Endnote specialist. Additionally, school of pharmacy student blackboard portal has an area where Drug Information resources guide (Appendix 29.6.2) is available to all students (Q4).

Professional librarians select library materials in assigned subject areas and receive requests for purchases from faculty and students, which are usually filled if they are one-time purchases (not subscriptions) and not prohibitively expensive. Selectors also review new course descriptions and program proposals to determine whether needed materials are available in the Library, and if not, in many cases—if they do not require ongoing subscriptions—they are purchased. An approval plan, in which books in profiled subjects are sent automatically to the Library by a preferred vendor, now provides
access to monographs electronically instead of in print; in this way the Library regularly adds ebooks to the library catalog that are published by university presses, professional and scholarly publishers. Selectors review the subject profiles in the approval plan periodically to ensure that appropriate materials are included. Selectors also have limited book funds with which to select and purchase other ebooks and, on occasion, print books. The library’s main vendor visited the library in 2011 to review the approval plan with each selector and visited again in 2014 to review changes and updates and to answer questions. Selectors also seek out additional relevant electronic, print, multimedia, and other materials for acquisition. (Q1,2)

The selector for the School of Pharmacy maintains regular contact with the dean and faculty of the School of Pharmacy, soliciting requests for books, serials, electronic resources and library instruction, and entering into dialogue with the School over major purchasing decisions. When necessary, the selector works with the School of Pharmacy and with the Collection Development Librarian to carry out serials reviews, reviewing usage of journals and databases and identifying low-use (and high cost-per-use) resources that are considered for cancellation (but not necessarily cancelled). The selector also works with other librarians, including collection managers for health sciences, biology, and general sciences, to discuss interdisciplinary purchases. For past three years, the STEM librarians at Snell Library, which include the pharmacy selector, have met more formally and consistently as a group to discuss issues of concern to all. The selector maintains a pharmacy and pharmaceutical sciences web page (“subject guide”) with links to licensed and other resources. The subject guide is heavily used by pharmacy students; as of October 6, 2014, it is the 2nd most-used out of 83 subject guides at the Northeastern University Libraries, with 13,579 hits so far this year (Q1,2).

Research and Instruction Services

Research assistance, including traditional and nontraditional reference service, is available in multiple forms—in person, phone, email, text message, and a 24-hour chat reference service called QuestionPoint. There is a research assistance office for unscheduled, walk-in assistance by professional librarians, now adjacent to a centrally-located unified service desk. The unified service desk opened in the fall of 2013, and prevents users from having to travel to multiple service points to have their questions answered. At that desk, circulation staff—who are trained to handle questions about library policies, book and DVD checkouts, document delivery, reserves, and fines—work alongside ITS staff, who answer computer, software, and technical questions. The desk staff refer all research questions to the new research assistance office, staffed by a librarian every day of the week. In the 2013-14 fiscal year, there were 3,627 in-person research assistance inquiries; 670 email reference transactions, 437 chat reference consultations, 114 text message inquiries, and 221,552 library subject guide hits. Walk-in assistance often leads to consultations (usually scheduled appointments) with library subject specialists; last year there were over two thousand research consultations. (Q7)

Library orientations are provided throughout the year to the Northeastern University community and include general tours, workshops, individual consultations, and classroom instruction sessions. The University Libraries provide these services for faculty (including adjuncts) to support research, curriculum development, and teaching. In the 2013-14 fiscal year, Northeastern University librarians based in Snell Library instructed a total of 7,291 people in 333 instruction sessions. Librarians gave 68 tours to a total of 858 people. Individual and small group research consultations during that time totaled 2,035. (Q5)

Librarians can provide customized workshops covering library resources and search strategies for a class, and customize additions to a course’s Blackboard page for the resources covered in the session.
Librarians now usually visit the classroom in which the class regularly meets, as there has been no dedicated interactive classroom in the library since early 2012. However, a new multipurpose training room with multiple workstations opened in the library in fall 2014, and will be available in the future for library instruction and other types of training. (Q5)

**Preceptors and library access**

Preceptors who complete the process to receive adjunct faculty appointment, are eligible receive a faculty ID which gives them full access to library facilities on campus. They are also able to receive a sponsored IT account that enables them to have access to the library resources off campus. This account requires annual renewal. (Q6,7)

Student and faculty survey data show high satisfaction with library resources (on and off campus) and computer technology. However, only 57% of preceptors (vs. 80% nationally) agree or strongly agree that “the college/school provides me with access to library and educational resources”. It appears that few preceptors take advantage of the library access available to them and the OEE needs to improve the communication about this access or operationalize automatic account creation and renewal for all preceptors (Q9).

**4. College or School's Final Self-Evaluation**

![Compliant](Compliant) ![Compliant with Monitoring](Compliant with Monitoring) ![Partially Compliant](Partially Compliant) ![Non-Compliant](Non-Compliant)

**5. Recommended Monitoring**

(School comments begin here)

Preceptor access to the library may need to be operationalized to ensure that all preceptors have library access and the links to library are available on the web site and in E*Value
Northeastern University / Bouve College of Health Sciences, School of Pharma

30. Financial Resources
The college or school must have the financial resources necessary to accomplish its mission and goals. The college or school must ensure that student enrollment is commensurate with its resources.

2. College or School’s Self-Assessment

| The college or school has the financial resources necessary to accomplish its mission and goals. | Satisfactory |
| The college or school ensures that student enrollment is commensurate with its resources. Enrollment is planned and managed in line with resource capabilities, including tuition and professional fees. | Satisfactory |
| Tuition for pharmacy students is not increased to support unrelated educational programs. | Satisfactory |
| The college or school has input into the development of and operates with a budget that is planned, developed, and managed in accordance with sound and accepted business practices. | Needs Improvement |
| Financial resources are deployed efficiently and effectively to: | Satisfactory |
| support all aspects of the mission, goals, and strategic plan | Satisfactory |
| ensure stability in the delivery of the program | Satisfactory |
| allow effective faculty, administrator, and staff recruitment, retention, remuneration, and development | Satisfactory |
| maintain and improve physical facilities, equipment, and other educational and research resources | Needs Improvement |
| enable innovation in education, interprofessional activities, research and other scholarly activities, and practice | Needs Improvement |
| measure, record, analyze, document, and distribute assessment and evaluation activities | Needs Improvement |
| ensure an adequate quantity and quality of practice sites and preceptors to support the curriculum | Needs Improvement |
| The dean reports to ACPE, in a timely manner, any budget cuts or other financial factors that could negatively affect the quality of the professional degree program or other aspects of the mission of the college or school. | Satisfactory |
| Business plans, including revenue and expense pro forma for the time period over which the change will occur and beyond, are developed to provide for substantive changes in programmatic scope or student numbers. | N/A |
| The college or school ensures that funds are sufficient to maintain equivalent facilities (commensurate with services and activities) across all program pathways. | Satisfactory |

3. College or School’s Comments on the Standard

Focused Questions
How the college or school and university develop annual budgets (including how the college or school has input into the process) and an assessment of the adequacy of financial resources to efficiently and effectively deliver the program and support all aspects of the mission and goals.

An analysis of federal and state government support (if applicable), tuition, grant funding, and private giving

A description of how enrollment is planned and managed in line with resource capabilities, including tuition and professional fees

A description of how the resource requirements of the college or school's strategic plan have been or will be addressed in current and future budgets

How business plans were developed to provide for substantive changes in the scope of the program or student numbers, if applicable

An assessment of faculty generated external funding support in terms of its contribution to total program revenue

How the college or school is applying the guidelines for this standard in order to comply with the intent and expectation of the standard

Any other notable achievements, innovations or quality improvements

(School comments begin here)
The School of Pharmacy has sufficient resources to meet its mission make progress toward goals identified in the strategic plan (Appendix 30.1.1). Resources are commensurate with enrollment and allow for quality programing. The school has a sufficient amount of reserves to address unexpected issues. (Q7)

The university’s financial affairs are administered by the office of the senior vice president for administration and finance. Budgeting and accounting oversight is provided by the Financial Affairs Committee of the Board of Trustees. The university operates on an annual fiscal calendar, July 1 through June 30, and prepares financial statements in accordance with generally accepted accounting principles. A system of internal controls is in place to safeguard the university’s assets and to ensure that all funds are properly accounted for and expenditures are made with appropriate authorization. (Q1)

The university has transitioned from a traditional budgeting system to a decentralized management model, responsibility centered management (RCM) system. The RCM model is designed to increase unit level accountability by giving units, in our case the Bouvé College, control of revenue as well as their expenses.

Within the college, department chairs provide budget requests directly to the college dean. While school dean is not directly involved in the budget requests, the dean works closely with the chairs when preparing budget requests from the departments. This model limits the ability of the school dean to revise budgets based upon the strategic goals of the school. This process should be modified to ensure input by the School Dean. (Q1)

Annual budgets within the school are primarily based upon student enrollment and are distributed directly to department chairs and the dean, who are responsible for management and oversight of their respective accounts. Student enrollment and thus annual budgets have been stable. The FY2014 budget of $22,562,802 is approximately 8.4% greater than the previous fiscal year. The stable budget allows for consistent delivery of quality programming and faculty, administrator, and staff recruitment.
(Q3) Extramural funding also remains strong ($10,268,044 the past fiscal year) and consistent and represents approximately 50% of the revenue yearly.(Q5)

Tuition at Northeastern University is slightly higher compared to the national average for private schools but competitive with other institutions of higher education in the Boston area, regional pharmacy schools and is lower than both peer match mates we use for curriculum surveys (Duquesne University and USC; Appendix 30.2.1). For many students the higher tuition is offset by financial aid and it has not impacted the ability to recruit qualified students. (Q2)

The university is responsible for maintaining and improving classroom facilities. The number, size and technology in each classroom are sufficient to meet the needs of the program. The department chair is responsible for ensuring adequate office and research space each faculty member. While the majority of faculty are satisfied with the office and research facilities a minority are not. For more detail see standard 27. Each unit is then charged based upon the amount of classroom space used. Units are responsible for paying for renovation of teaching laboratories, faculty and staff office space as well as research laboratories. When renovations are needed the work must be done by in-house personnel and there is concern that the cost charged is not competitive with outside vendors and this reduces the ability to renovate needed areas. This issue needs to be discussed further with University Administration. (Q7)

Budgets allow for curricular innovation as described in Standard 10. The college has recently completed construction of the Arnold S Goldstein Simulation Laboratory and this will serve as a space for interprofessional activities (see Standard 27).(Q8)

Innovation in research and scholarly activities is provided by a number of offices/units within the university. The Office of Research Administration and Finance provides expertise and highly specialized services in research management. The Office of Research and Graduate Education supports research and innovation by conducting outreach to funding agencies and corporate and foundation sponsors, and developing partnerships with academic, clinical, and industry collaborators that increase the scope and impact of Northeastern University research. They also provide internal grants to facilitate additional research projects. The Center for Research Innovation seeks to bridge the gap between laboratory research and need-based solutions. Each college also has an Associate Dean for Research which provides a number of services to assist faculty in developing innovative research and scholarly activities. (Q8)

Evaluation of all courses at the university courses is supported by the Office of the Provost and the Office of the Registrar and conducted using the Teacher Rating And Course Evaluation (TRACE) Survey. The survey is conducted at the end of each semester, analyzed and and is available to the university community (faculty and students) through online links to survey results. The School of Pharmacy Director of Assessment and the School of Pharmacy Assessment Committee are responsible for Programmatic and curricular assessment of the Doctor of Pharmacy Program. The Director of Assessment is individual is a faculty member with an administrative appointment who also has teaching, service and scholarly requirements. This individual has access to administrative support staff that can assist with these activities. However, given the range of assessment and evaluation activities required, there is concern the resources are not sufficient. (Q7)

The School of Pharmacy Office of Experiential Education (OEE) is responsible for ensuring an adequate quantity and quality of practice sites. The OEE has two cooperative education coordinators who are responsible for administering the Introductory Pharmacy Practice Experiences. The Director, Program Manager, and support staff is responsible for administering the Advanced Pharmacy Practice
Experiences. Through the self-study process, it appears that the OEE can use additional resources that can focus on preceptor orientation and development and quality assurance of sites. (Q7)

Most of the pharmacy students come to the university directly from high school. The university is responsible (with guidance from the program) for the admission process for these students. The budget for the pharmacy program is based upon enrollment targets agreed upon by the school, college and university. The university has been effective in meeting the agreed upon enrollment targets, however, recently the number of students admitted into pre-pharmacy early assurance freshman track has declined. The program has been able to augmented enrollment with transfer and change of major students during freshman and sophomore years. Additionally, the School of Pharmacy is responsible for admitting students into the first professional year of the pharmacy program. This provides additional stability in the number of students as the number of students admitted through alternative direct entry graduate student pathway (Standard 17) can be modified to achieve the enrollment targets.(Q3)

The Dean of the School of Pharmacy with support from the Bouvé College of Health Sciences and the university oversees activities to acquire extramural funding. The school works well with the Bouvé College of Health Sciences’ development team to attract external funding to support the school and its operations. Specific members of the Bouvé College of Health Sciences development team work with school faculty and administrators in the following areas: corporations and foundations, major gifts, annual fund, and alumni giving. In 2014 the University started the [Empower Campaign] with the goal of raising $1 billion dollars by 2017.(Q2)

4. College or School's Final Self-Evaluation

☐ Compliant ❑ Compliant with Monitoring ☐ Partially Compliant ☐ Non-Compliant

5. Recommended Monitoring

(School comments begin here)

Will monitor availability of resources available to the school of pharmacy overall, particularly in light of decrease in student enrollments into pre-pharmacy early assurance cohort. The Dean should have more direct influence and control over the school's budget. Additionally, resource needs for assessment and OEE should be evaluated.