

Reducing Curricular Hoarding in a Next Generation Pharmacist Curriculum

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Objective

To describe the systematic approach to reducing curricular hoarding while developing a new Doctor of Pharmacy curriculum at Virginia Commonwealth University (VCU) called the Next Generation Pharmacist (NGP).

Methods

The NGP task force was appointed by the Dean (Figure 1). A faculty retreat focused on defining the necessary knowledge, skills, and attitudes necessary for NGP. Core competencies were drafted by School faculty at a retreat. During 2020, job descriptions for 7 pharmacy sectors were developed with input from outside stakeholders.

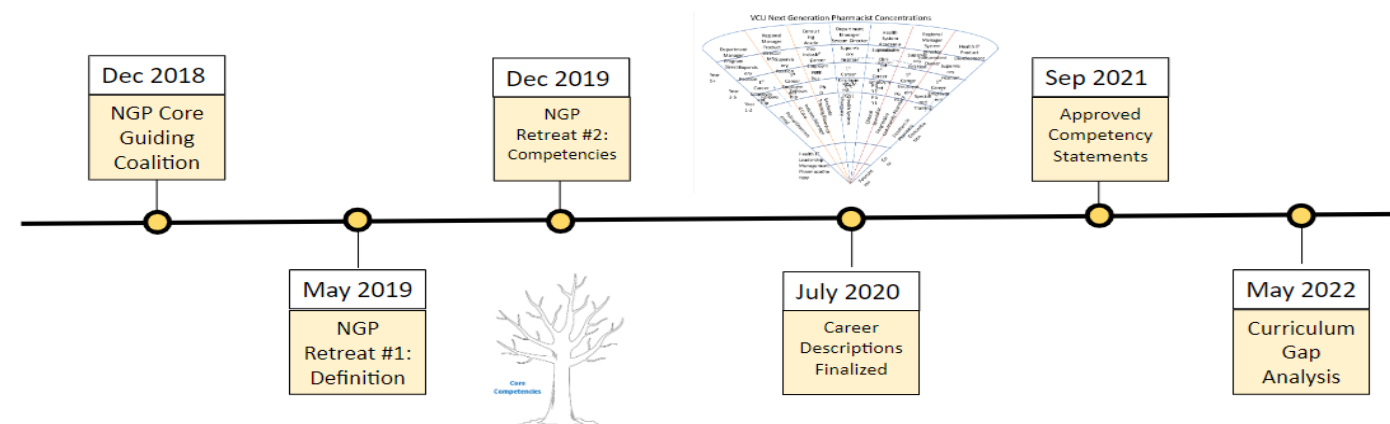


Figure 1. Timeline of Next Generation Pharmacist activities before creation of the Curriculum
Table 1. Core Competency and Statements for NGP

Core Competency	Competency Statement
1. Knowledge Integration	Integrate knowledge of basic biomedical, pharmaceutical, social and behavioral, and clinical sciences, and the principles and practice of pharmacy to advance human health.
2. Patient Care	Provide person-centered care to optimize health outcomes for all patients by considering individual values, beliefs, and identities including, age, race/ethnicity, gender identity, sexual orientation, and socioeconomic background.
3. Systems-Based Practice	Ensure safe and effective medication use systems through an application of healthcare regulations, pharmacoeconomics, population health, and team-based care.
4. Informatics	Analyze biomedical data to inform and improve healthcare delivery and policy.
5. Information Mastery	Apply evidence-based principles to ensure mastery of information in the practice of pharmacy.
6. Communication	Communicate with patients, caregivers and healthcare professionals to obtain health-related information, provide patient and medication information, and document clinical interventions.
7. Professionalism	Demonstrate altruism, ethical principles, integrity, responsibility, and respect in decision-making and healthcare delivery.
8. Continuous Professional Development	Implement a personal plan for intellectual growth and maintenance of professional competence through reflection on personal knowledge, skills, abilities, beliefs, biases, and motivation.
9. Leadership	Demonstrate the character, behaviors, and skills of a servant leader across all sectors of pharmacy practice and healthcare.
10. Entrepreneurship	Create opportunities for change, growth, innovation, and advocacy within pharmacy practice and healthcare.

Methods

Using the core competencies and job descriptions, competency statements were drafted and approved in September 2021 (Table 1). The existing curriculum was also compared to national averages of core content areas (Table 2). In May 2022, a curriculum gap analysis and survey of faculty regarding content areas was conducted (Figure 2). The first version of the NGP curriculum was drafted in December 2022. This began an iterative process including meetings with departments, curriculum committee members, and key stakeholders. The sixth and final version was approved by the faculty in August 2023.

Table 2. Comparison of Curricula to Virginia Commonwealth University's

Courses	Non-integrated Programs (N=45)	Integrated Programs (N=95)	VCU
Drug Therapy/ Integrated credits	27 (20-32)	37 (32-43)	41
Medicinal Chemistry	8 (4.5-11)	5 (3-7)	6
Pharmacology	8 (3.5-9)	2 (1-5)	1
Pathophysiology/Physiology	8 (5.5-12)	5 (3-8)	10
Social and Administrative	15 (13-19)	15 (12-18)	20
Experientials	7 (6-8.8)	8 (6.3-11)	7.5
Clinical Skills	12 (8-15)	12 (8-14)	10.8
Scholarship	5 (3-6)	5 (4-7)	6
Electives	6 (4-8)	6 (5-9)	5
Genomics	0 (0-2)	1 (0-2)	1
PCEU	6 (4-7)	6 (4-7)	6
PKPD	5 (4-6.4)	4 (3-6)	7
Total Credits	106 (102-113)	108 (102-115)	111.3

Faculty Recommendations Regarding Changing Hours in Content Areas

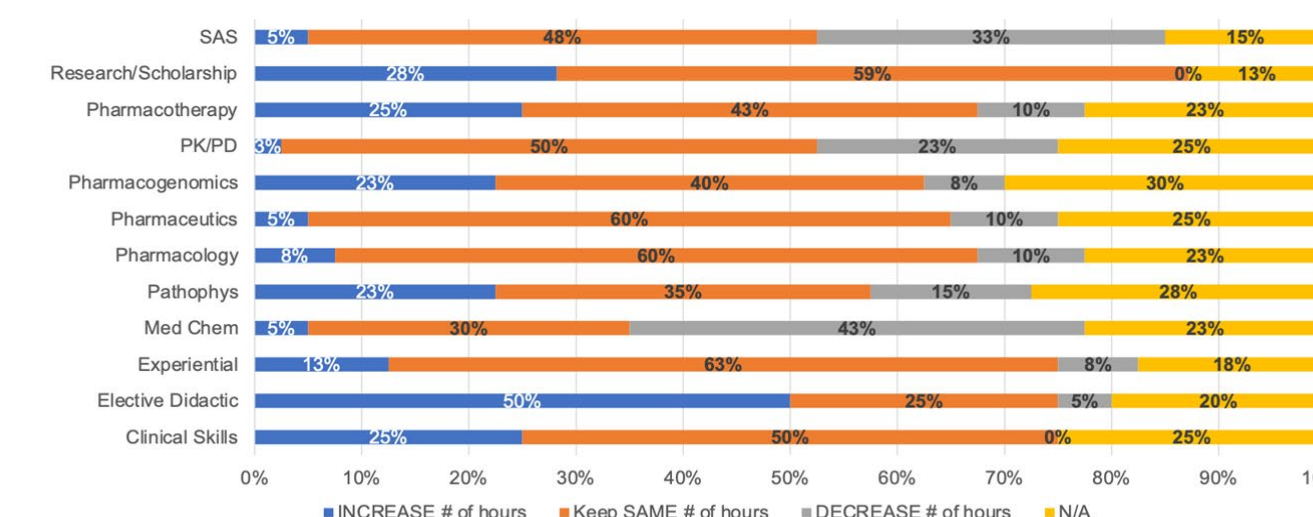


Figure 2. Faculty Recommendations for Content Areas in NGP

Results

The NGP curriculum changes are shown below in Figure 3 for the four-year didactic program.

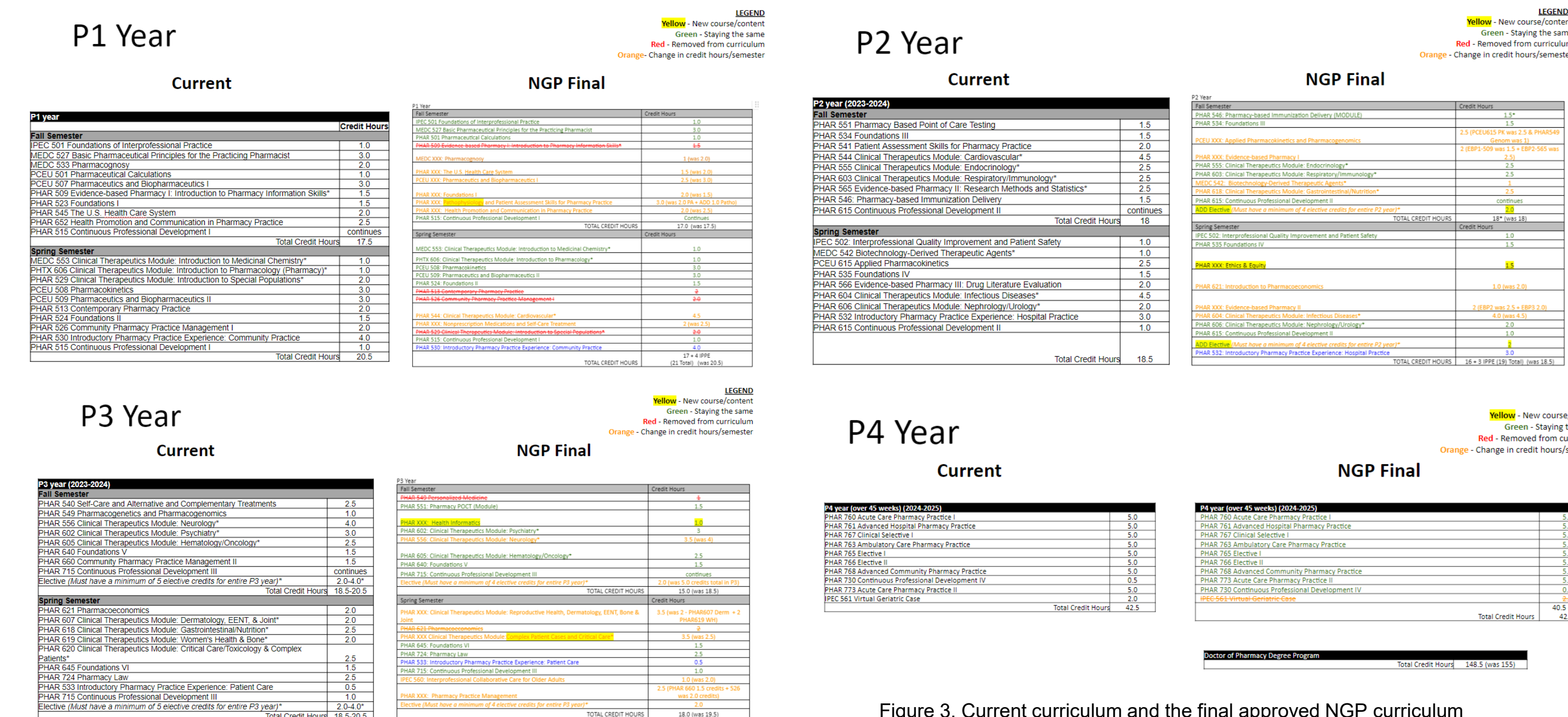


Figure 3. Current curriculum and the final approved NGP curriculum

Results

- The NGP curriculum reduced credit hours from 155 to 148.5 by removing duplication of topics across classes and combining similar courses.
- The new curriculum will start with the incoming first-year class in Fall 2024.
- Compared to other schools of pharmacy curricula, VCU had a substantially higher amount of social and administrative sciences, which was reduced in the new curriculum.
- The NGP curriculum added content in pathophysiology, ethical practice, digital health, and increased didactic elective credit hours.

Discussion

- Mapping to pharmacy curricula to all schools was helpful in determining curriculum hoarding.
- The NGP process took over five years to complete, highlighting this is not a simple process, but complex with many stakeholders involved.
- Currently, we are working on adding concentrations into the NGP curriculum so students can focus on a particular area. We will be piloting: Geriatrics, Digital Health, and Industry.

Conclusion

- This multi-year process resulted in reducing curricular hoarding in a systematic, collaborative way. A similar process can be used at other schools of pharmacy.

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