

Simultaneous New Curriculum Implementation and Assessment: Building a Plane with the Check Engine Light on



Paul Fina, PharmD, BCACP, BCPS

Jeremy Hughes, PharmD, EdDc

Edward Ofori, PhD

Mohd Shahid, PhD

Trishia Shaw, PharmD, BCPS

Betty Vu, PharmD, BCPS, BCIDP



CHICAGO STATE
UNIVERSITY

Learning Objectives

1. Identify critical aspects and develop an integrated framework of a simultaneous curriculum implementation and assessment process, including strategies for rapid assessment and possible pitfalls in the processes
2. Discuss multiple assessment methodologies for a new curriculum, including iterative course review and syllabus review processes, course level assessment, end-of-year examinations, objective structure clinical exams, and licensure exams.
3. Discuss how the principles of design thinking and agile project management can be applied to full-circle assessment of a curriculum.
4. Compare and contrast approaches for promoting faculty engagement during simultaneous curriculum implementation and assessment of new curriculum



Who is Here?

Do you teach health professions?

&

Do you teach at a 2yr or 4yr institution?

&

Are you a faculty, faculty-administration, staff,
administration, or other?



Chicago State University

- Doctor of Pharmacy (PharmD), 4 year, cohort model
- Target class size - 50 students per class
- **Located on the southside of Chicago**, Founded in 2007
- Predominantly Black Institution
- Rapid curriculum development and implementation in 2020



Root Cause Analysis Findings

1. Need for Standard Examination Preparation (NAPLEX / PCOA)
2. Delay in Taking NAPLEX
3. Didactic Curriculum Quality Deficiency
 - a) Curriculum Mapping
 - b) ACPE Didactic Content Assessment
 - c) ACPE Didactic Content Performance
4. Pre-APPE and APPE Readiness Preceptor Feedback
5. Insufficient Prerequisite Knowledge at Matriculation
6. Lack of Student Accountability, Self-Awareness, and Professionalism
7. Instability in Internal and External Environment
8. Need for Population Specific Student Support Services

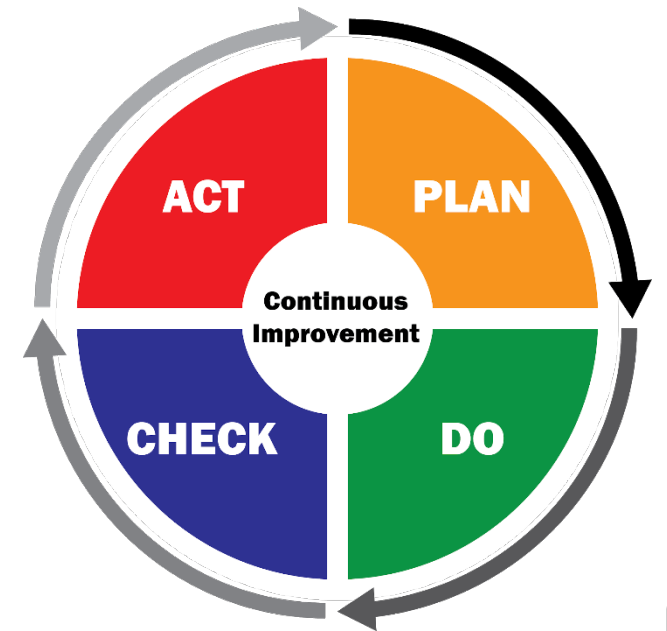


Curriculum Revision Goals

- Prepare practice ready pharmacists
 - Culturally competent and representative pharmacists from Chicago's South Side
- Improve first time pass rate on licensure exams

Curriculum Optimization:

- Appropriate sequencing of content
- Address identified gaps in curriculum
 - Mapping
- Reduce undesired redundancies in the curriculum
 - Recognize the value of double pass





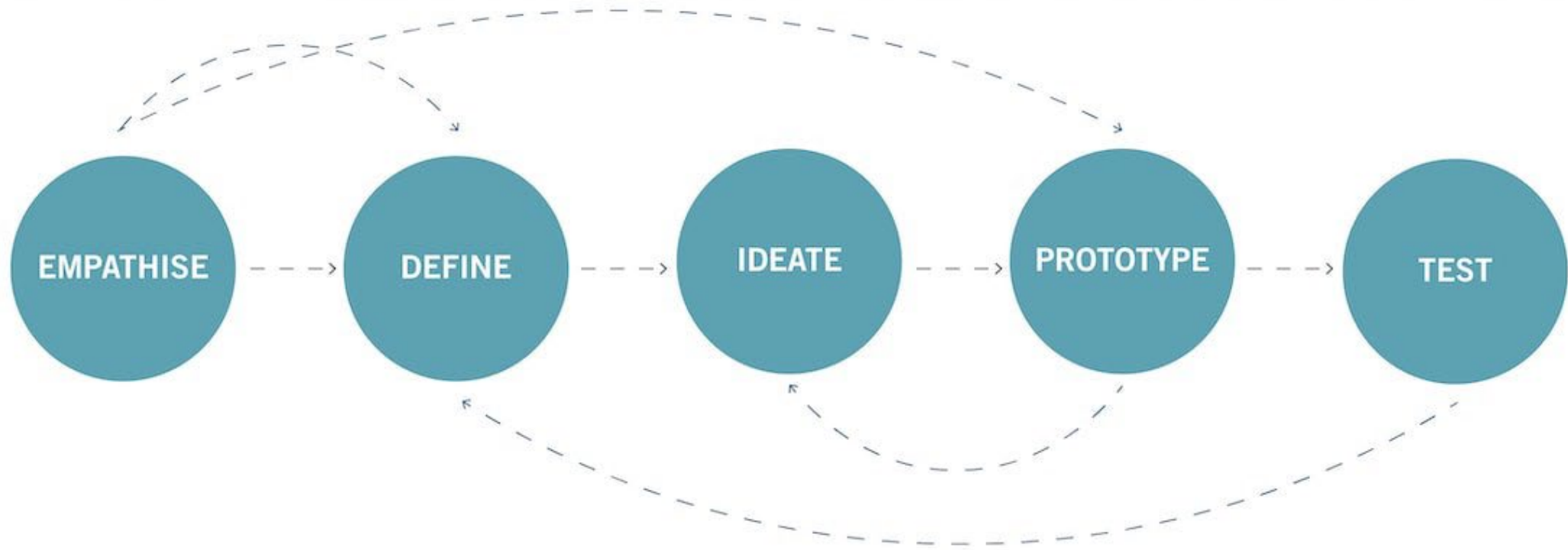
Design Thinking and Agile Project Management in Full- Circle Assessment



Design Thinking

A practical, iterative, user-centered and non-linear process used to understand users, define the problems, develop creative solutions, and build and test solutions

5 PHASES OF THE DESIGN THINKING PROCESS



Agile Project Management

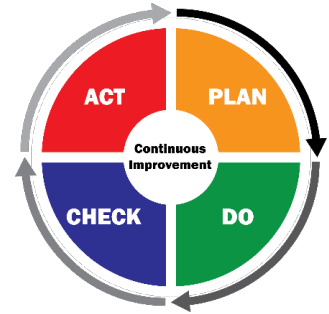
“An iterative development methodology that values human communication and feedback, adapting to change, and producing working results”

1. Individuals and interactions over processes and tools
2. Results over comprehensive documentation
3. Customer/stakeholder collaboration
4. Responding to change over following a plan



Full-Circle Curriculum & Assessment

1. Focus on and circle back to the goal of the curriculum
2. Trust in our faculty
3. Everyone, internal and external stakeholders, has a seat at the table
4. Embrace feedback and change
5. Explore new methods and pilot when possible
6. Design, review, and then embrace feedback
7. Implementation of a course review process
8. Check-point development for students (OSCEs & Milemarkers) for shorter feedback loops



Our Timeline of Implementation and Assessment



ACPE Interim Report

Meetings with consultant and curriculum review

Summer Planning / Curriculum QA & Oversight

New Courses Implemented

11/2019

02/2020 – 04/2020

05/2020 – 06/2020

Fall 2020

02/2020

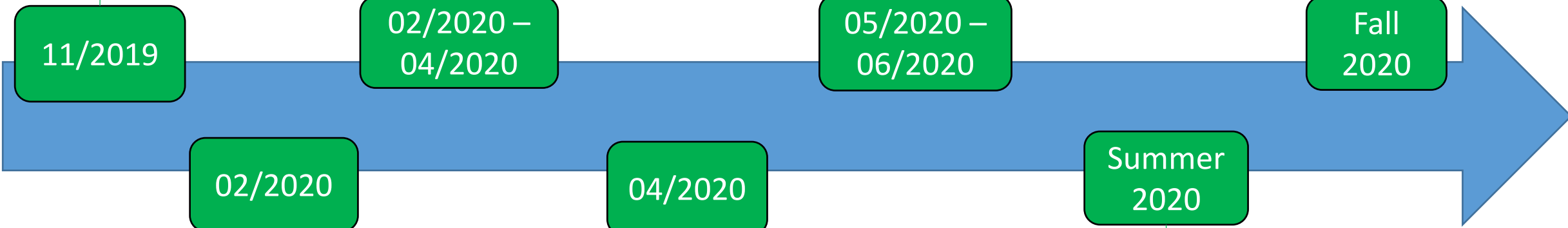
04/2020

Summer 2020

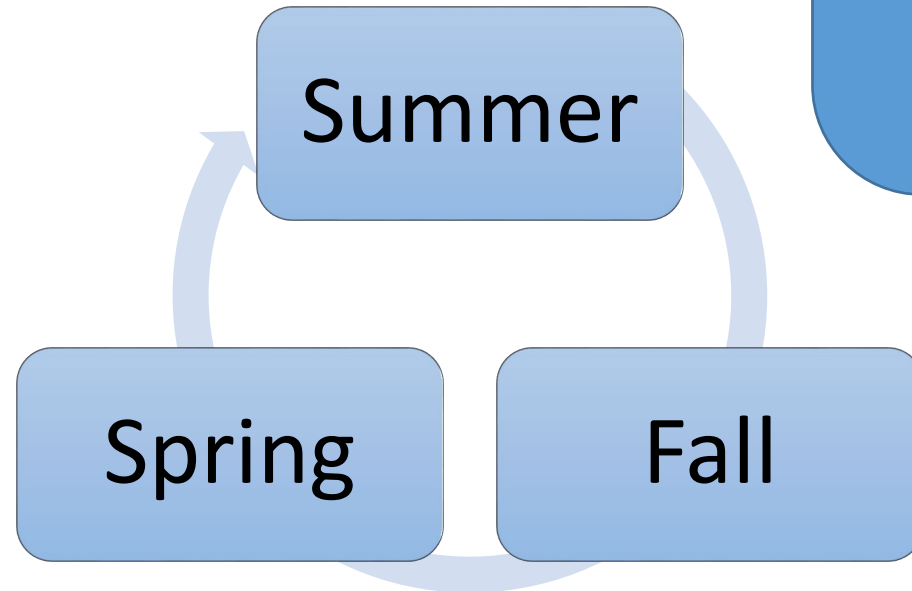
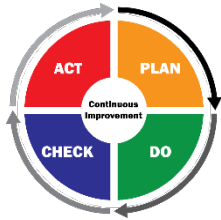
Probation

College voted on new curriculum

University New Curriculum Process



Roll-Out Cycle



Core Focus Group Meets with Course Coordinators of New Courses

- New Syllabus Prepared (Feedback)
- Course Mapped to:
 - PCOA
 - NAPLEX Blueprint
 - EPAs
 - DAST Integration
 - PPS integration

New Course Roll-Out

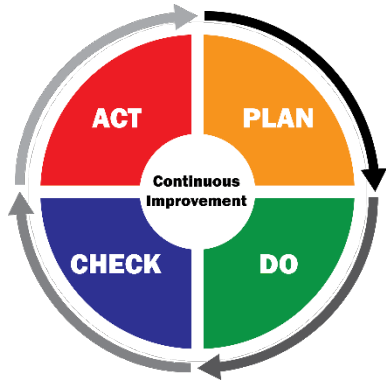
- Formal course review of Fall courses

New Course Roll-Out

- Formal course review of Spring courses



Summer Review Feedback



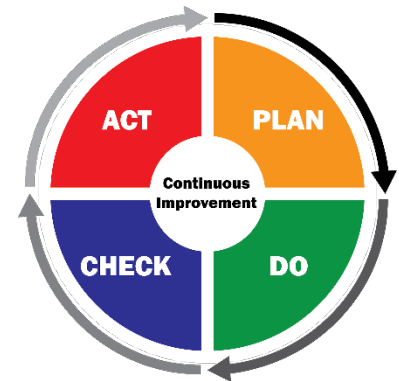
Curriculum Review Checklist

Name of Reviewer(s):
Date: 6/13/2021
Course # and Name: PHAR 6121 Pharmacy Immunology

	Provided	Missing	Not Applicable
1) Syllabus <ul style="list-style-type: none"> Lecture topics and time allotted Provided Workshop topics and time allotted Missing Lab Hours N/A Active learning activities Provided Homeworks/Assignments Missing Course Level Assessments Provided 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2) Course Map to PCOA Content Area	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3) Course Map to NAPLEX Blueprint	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4) Course Map to EPA (<i>where applicable</i>)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5) Content Area Identified for Integration into DAST 1-8 (<i>where applicable</i>) <ul style="list-style-type: none"> Integrate calculations 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6) Content Area Identified for Integration into PPS Series <ul style="list-style-type: none"> Clinical pharmacokinetics OSCEs SOAP notes Interviewing/communication skills Cultural Sensitivity and Inclusive Cases Pharmacist Patient Care Process 	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6) Other relevant documents attached (Optional)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Summer Review Feedback



Course description does not match what was submitted on Form 2, which is the approved description – “This course will cover basic principles of immunology including: cells and organs of the immune system, activation of the immune system, and the role of the immune system in response to infectious disease. It will highlight innate and adaptive immunity, principles of antibody actions, and hypersensitivity and types of reactions. Other topics include organ transplant, autoimmunity, and immune suppression.”

- Workshop and ALA – Descriptions needed for what will be covered during workshops and if the entire time will be used.
- Attendance and participation sections of syllabus review refers to P-1 students but this is a P-2 course
- Statement from the abilities office is not included
- It would be helpful to include the universal syllabus policies that are covered.
- In what lectures are immunizations covered? It seems like it could be more than one.

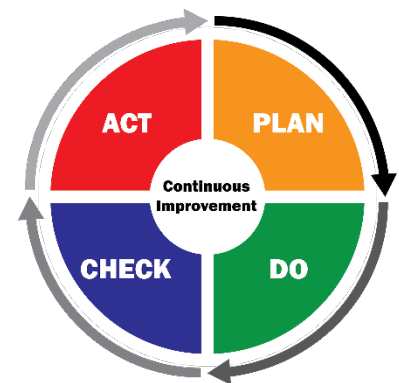
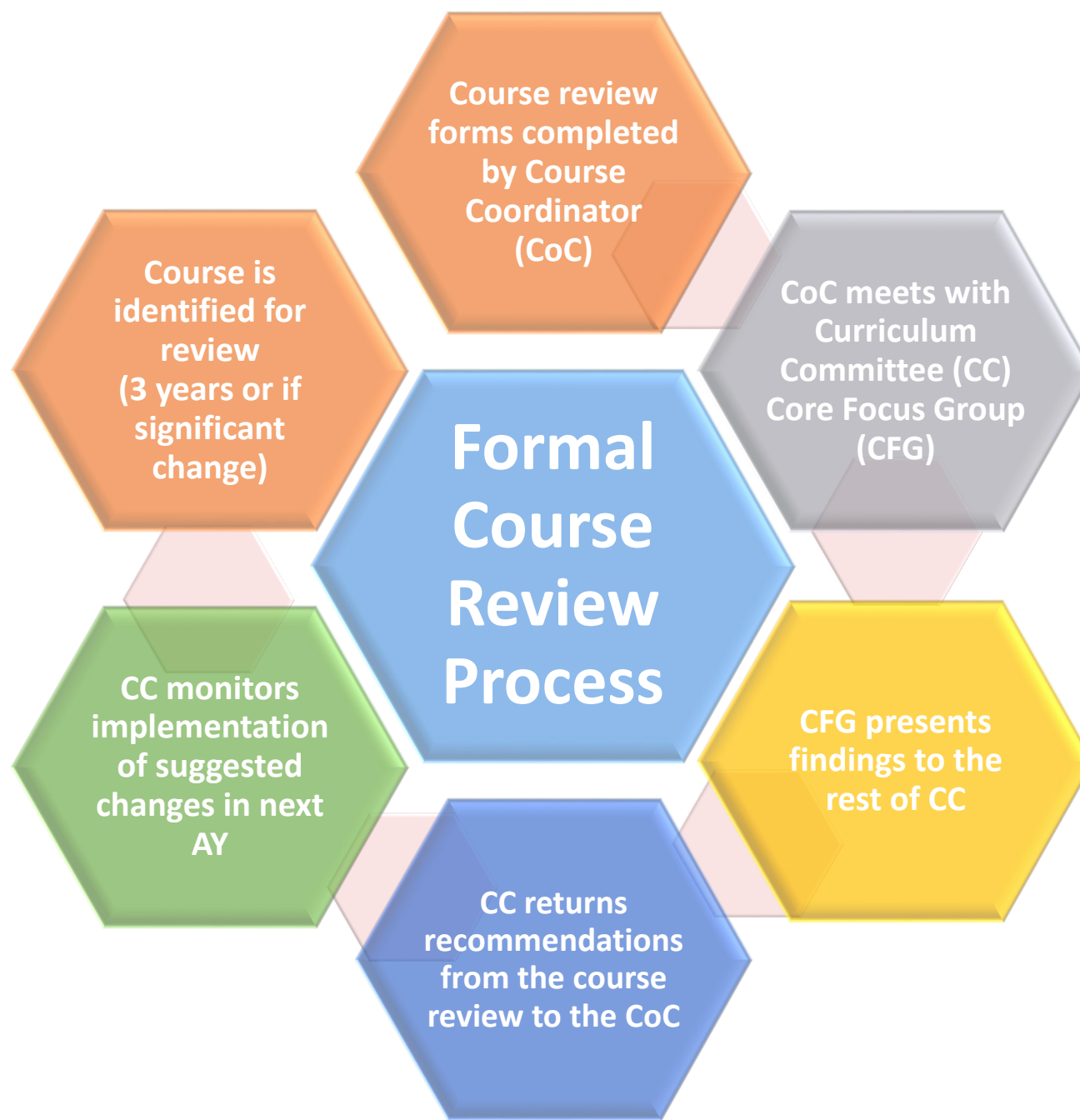
PCOA Mapping:

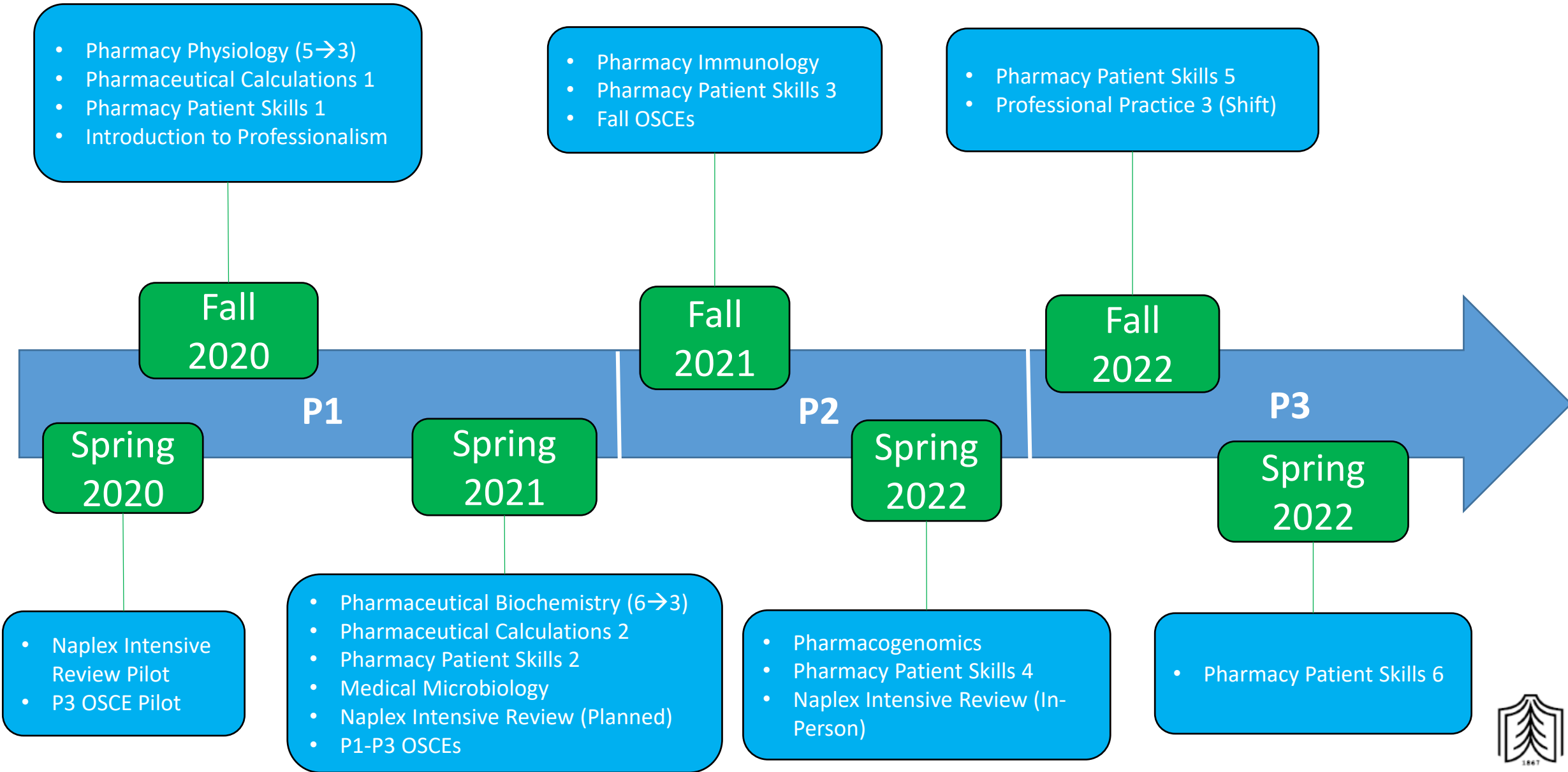
- Mapping can be to multiple PCOA standards. For example – b-cell development and activation should like be to both 1.4.1 and 1.4.2. This applies to a couple other ones in there as well. Please review.
- Biotechnology applications and immunological laboratory tests don't seem to be appropriate for 1.4.3. if they don't map to these but you feel they are essential, that is okay by me.

Naplex Mapping

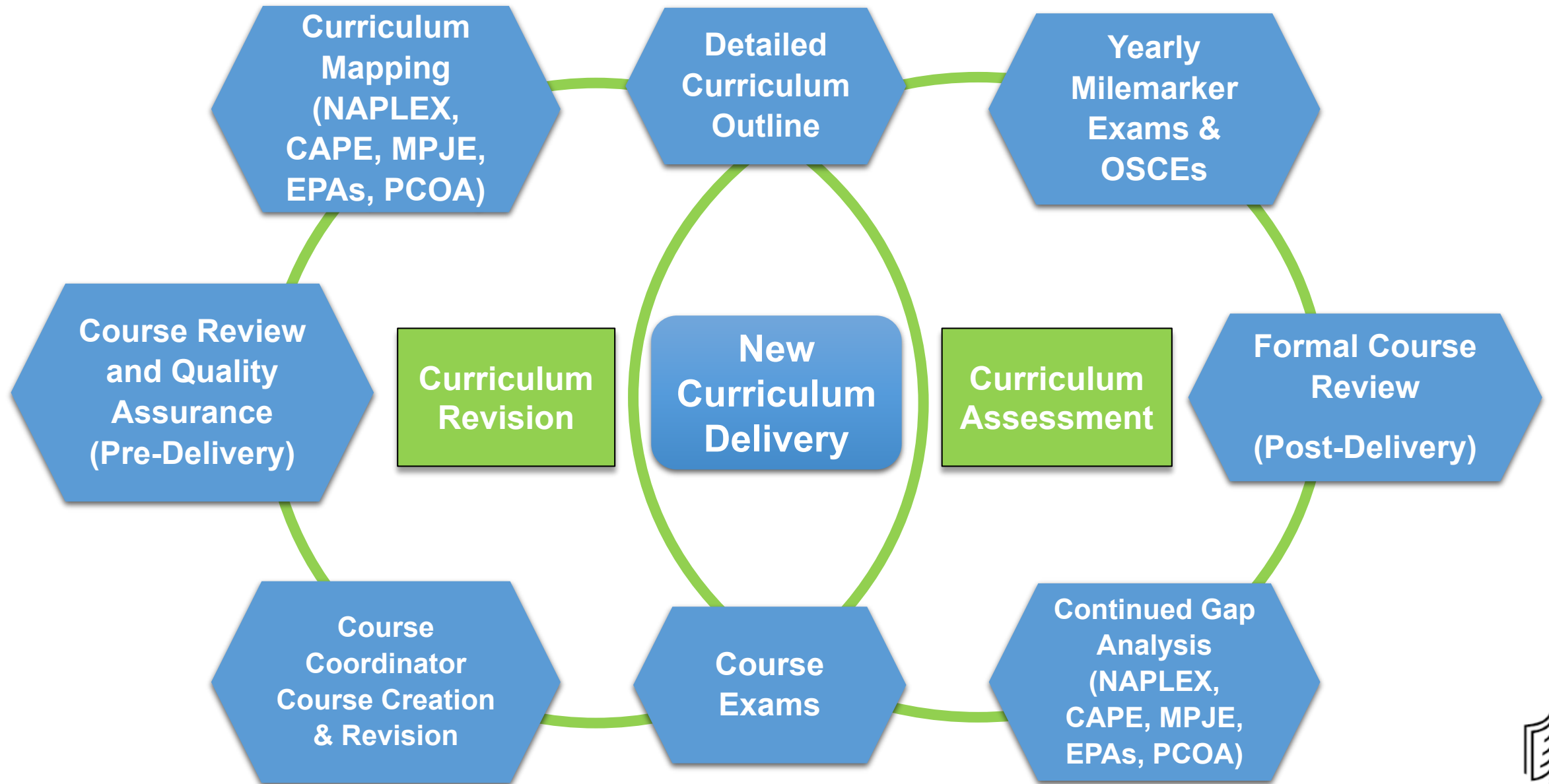
- 3.6 & 3.7 maps to the hypersensitivity reactions
- 6.3 & 6.4 would map to immunization lectures







Simultaneous Curricular Revision and Assessment



Think – Pair – Share

How do you know your curriculum is working? /
How do you assess your curriculum?

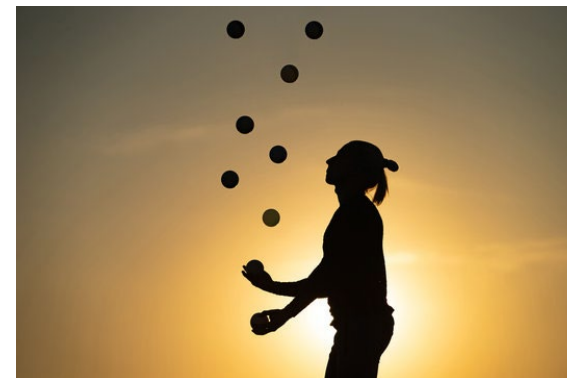
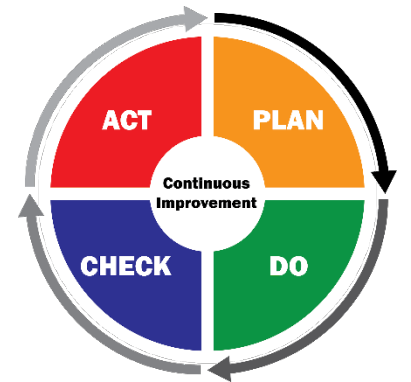
&

What might be some challenges with a new
curriculum?



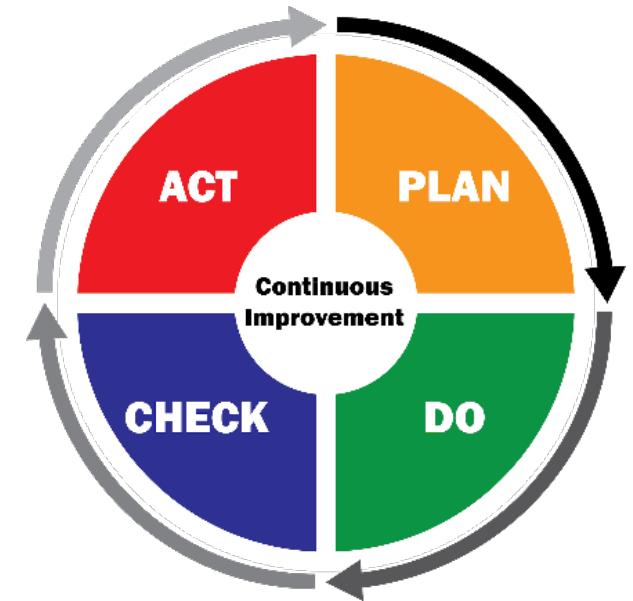
Critical Aspects of Our Process

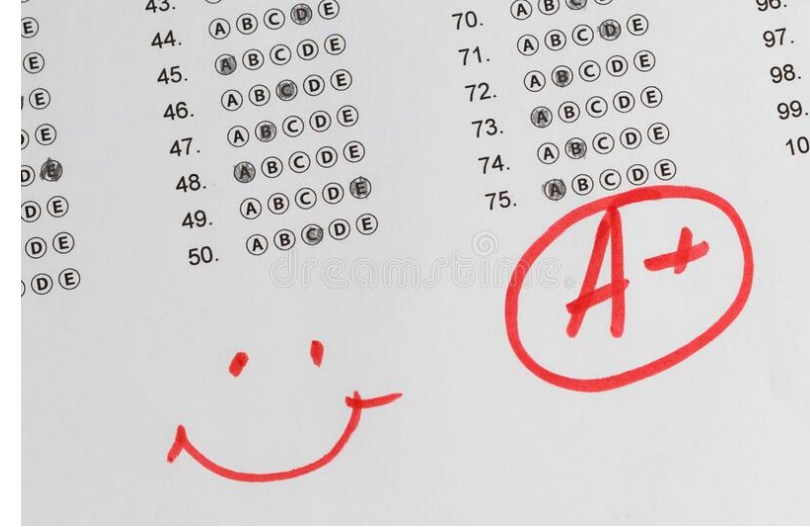
- Understand your human resources and available workload capacity
- Know where your experience and competencies lie
- You're not sure what you're assessing
 - Everything is new, so there is a lot of work to do
 - Strategic planning
- Track your many ongoing activities
- Iterative / Cyclical process
- Stakeholder focused



Strategies for Rapid Assessment

- Focus on your goals
- Identify stakeholders early
 - Continuously seek stakeholder feedback
- Assess throughout curriculum implementation
 - Assess your assessment process
- Assess in small chunks
- Focus on the newest topics / curriculum
- Use what others have done
- Use principles of design thinking and agile project management





Other Assessment Methodologies



All topics covered

**Learning environment:
Lab/ Workshop/
Lecture**

**Detailed
Curriculum
Outline**

**Amount of time spent
on each topic**

Order of topics taught



Gap Analyses / Mapping

- Identify expert organizations in your field
 - Compare your coursework against suggested coursework and competencies
 - Topic and skills coverage and progression
 - Cross-course alignment
- Report findings from gap analyses
 - Redundancies identified and gaps covered
- Defined decision making process
- Introduction / Reinforce / Competency



Syllabus Review

- Initial review performed by curriculum committee
 - Transitioned to a checklist for faculty
- Asking earlier and earlier for faculty to submit syllabi
 - Good for operations
 - Adjunct faculty planning
- Formalize expectations and scheduling



Yearly Milemarker Exams and OSCEs

- Foundational yearly benchmark examinations (Milemarkers)
 - Test on core concepts from the past year
 - Incentivize student performance
- Biyearly objective structured clinical examinations (OSCEs)
 - Core competencies
 - Essential pharmacist skills
 - APPE/IPPE readiness
 - Practice readiness



NAPLEX Intensive Review

- Round 1 (2020) – Virtual pilot
- Round 2 (2021) – Virtual planned
- Round 3 (2022) – Live and In-person
- Other changes:
 - Pre-matriculation bootcamp
 - Workshops
 - Mindset
 - Standardized testing
 - Pathway to Excellence





Promoting Faculty Engagement

Think Pair Share

What strategies have you used to promote faculty buy-in?



General Engagement Strategies



Circle Back to What and Why

**What Drove
the Change**

**Review
Previous
Deficits**

**State Your
Goals**

**Highlight
Learning
Outcomes**



ADKAR and Piloting Framework



Possible Pitfalls

- Keep in mind initial implementation challenges and methodologies to know where possible gaps are and your strengths are
- Consensus by acquiescence
 - Feedback perceived as unwelcome
 - Lack of stakeholder participation
 - Closed collaboration
- Not treating the curriculum holistically
 - Use of single data points
 - Need for inter-course topic series mapping
- Blind spots
- Fatigue



Pearls



- Keep in mind your “What” and “Why” – Your common goal
 - Ensure faculty are involved and engaged
- Embrace a culture of assessment and CQI
- Utilize agile project management and design thinking
 - All feedback is valuable feedback
 - Not being 100% optimal is okay
 - The process is iterative - Every run through is a opportunity to learn and develop
- Rapid Assessment Strategies:
 - Use what you have already
 - Transform it when it doesn't already suit your needs
 - Frequently ask insiders and stakeholders
 - People closest to the curriculum will know the curriculum needs
 - Utilize ADKAR and piloting frameworks



Questions & Comments



Appendix



Awareness

Team members know...

- **Need** for change
- **Reason** for the change
- **Benefits** of the change
- **Timeline** for the changes

Team members ask questions about the changes



Board Pass Rates

Accreditation Compliance

- St 10 – **Curriculum Design, Delivery, and Oversight.**
- St 24 - Assessment Elements for Education 1: Educational Outcomes
- St 25 – Assessment Elements for Section 2: Structure and Process

Hired external consultants



Desire

Evaluate Reactions of Team

- Identify Champions
- Address concerns
- Demonstrate benefits

- Principles of Intrinsic motivation
 - Choice
 - Competence
 - Connectedness
- WIFM

TBL modeled at Winter 2020 strategic planning

- **Open invitation** - identify champions and pilots
- Curriculum committee – identified courses and suggested





Knowledge

Address gaps in...

- Knowledge
- Skills
- Mindsets

- Trainings
- Coaching

- Faculty Development workshops
- Piloting Program
 - Initial planning
 - Awareness of what others were doing
 - Check-ins
 - Idea and experience sharing





Ability

Piloting to...

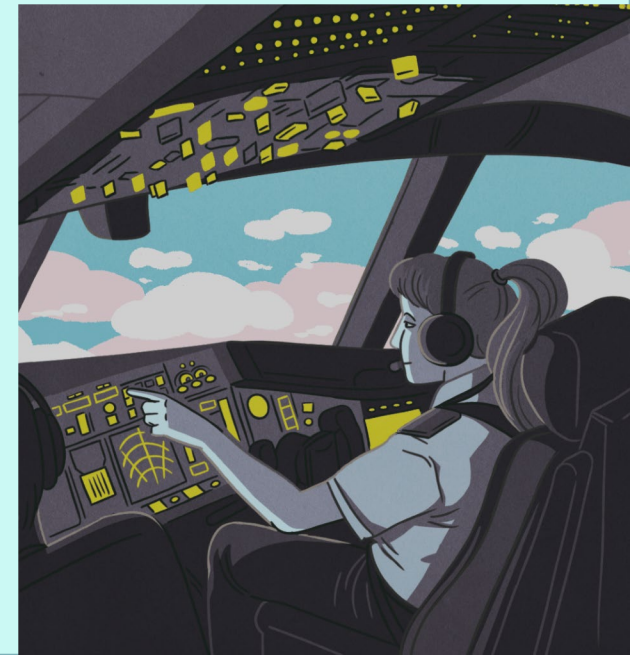
- Demonstrate viability
- Build Confidence
- Promote **psychological safety**

- Assist in Goal Setting
- Feedback opportunities & **Adjustment**

- Promote teaming
 - Support & Mentorship

- Debriefings
 - Middle and end of semester
 - SII Model
- Peer mentorship

- Assessment
 - Polling
 - End of Course Evaluations





Reinforcement

Maintain the Initiative

- Expansion of pilot
- Recognition and reinforcement
- Ensure desired outcomes



- Results shared (pilot debrief & student surveys)
 - Accreditation
 - Curriculum Committee
 - Faculty/Staff Meeting
- Expanded to Spring Courses
- Scholarly collaborations