

NO NEED TO REWIND THE CLOCK: REFLECT, REVIEW, AND RETAKE AS IN-COURSE REMEDIATION APPROACHES

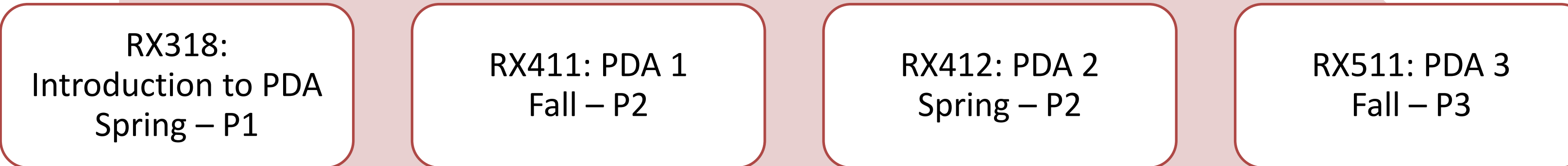
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PURPOSE

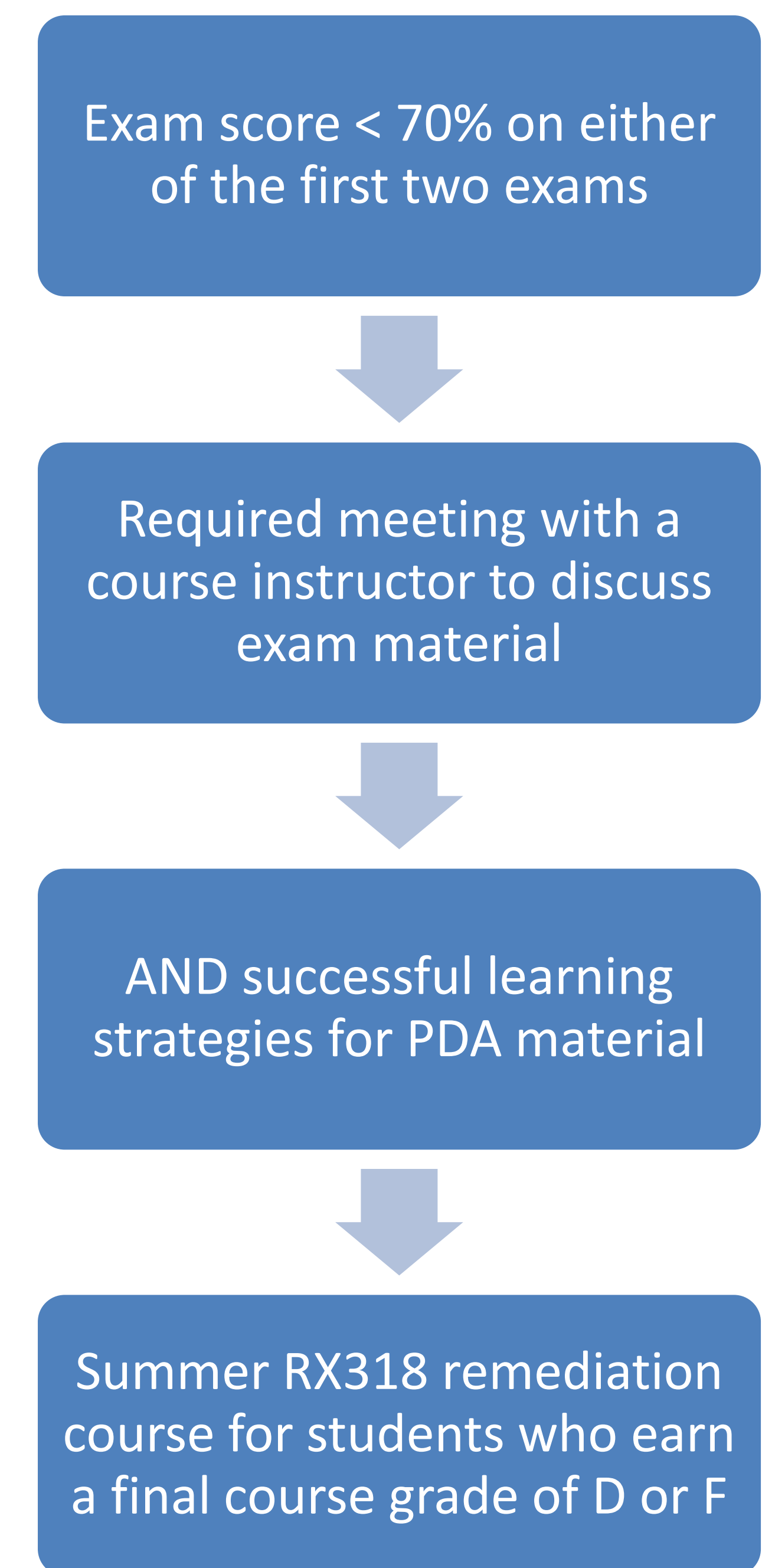
- To describe in-course remediation approaches within three required pharmacy courses at Butler University College of Pharmacy and Health Sciences

PRINCIPLES OF DRUG ACTION

- Principles of Drug Action (PDA) is an integration of pharmacology and medicinal chemistry



Remediation Process for RX318



Remediation Components

- Instructor meeting focuses on retrieval as the key to learning and Ebbinghaus' forgetting curve
- After each mid-term exam, all students in all PDA courses are invited to participate in an optional exam retake in preassigned groups
- Students scoring $\geq 95\%$ on the retake exam, earn two bonus points
 - 95% of students enrolled in RX318 Spring 2022 participated in exam retake process
 - 86% of students who took the retake exams scored 95% or higher
 - All students scored $> 75\%$

Spring 2022 RX318		
Exam 1 < 70%	Exam 2 < 70%	Final Course Grade Below C
20/79 (25%); met with 19	40/70 (57%); met with 36	D = 14/79 (18%) F = 4*/79 (5%) Total 18/70 (26%)

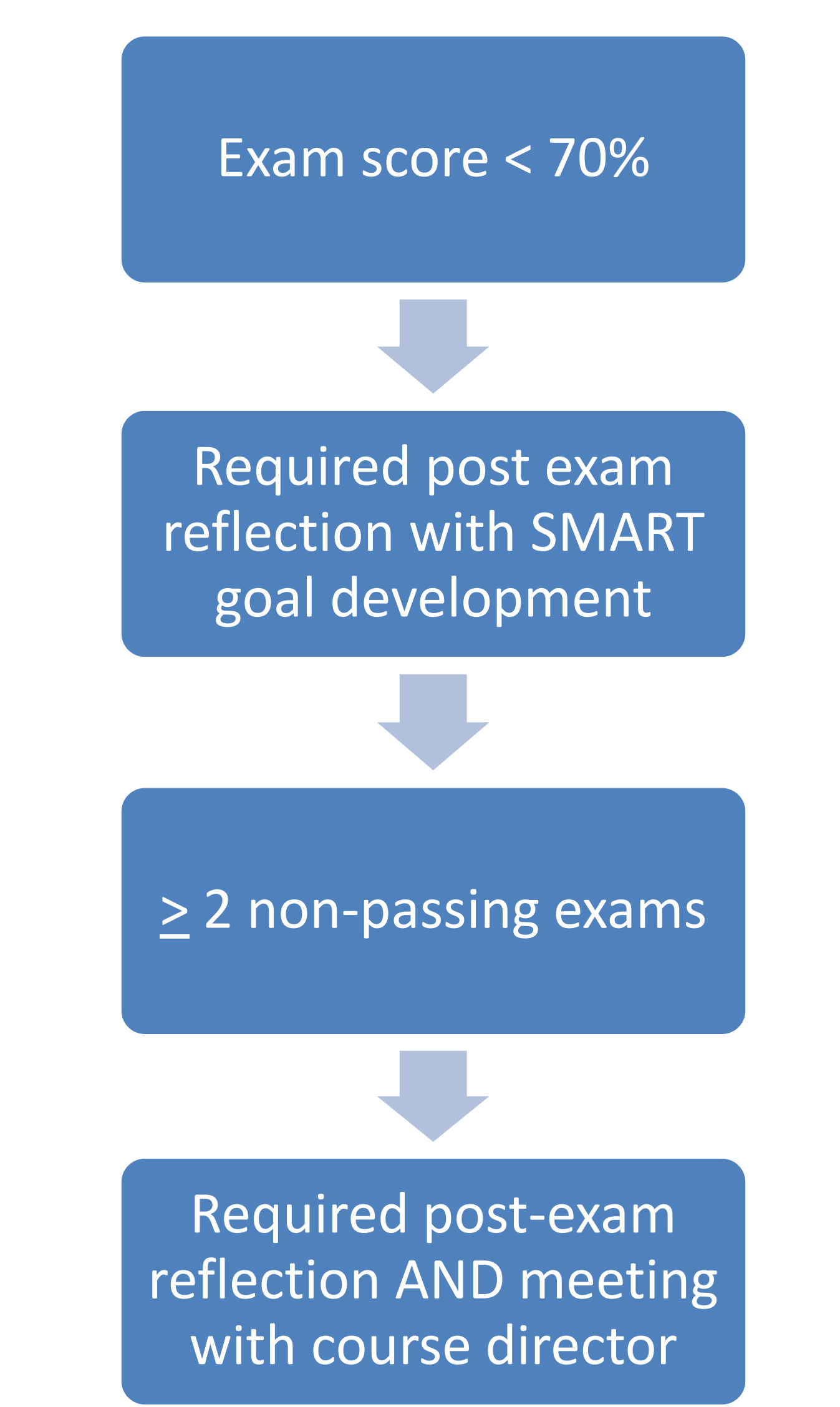
*One F due to cheating

- Summer 2022 RX318 Remediation Course: Cohort Longitudinal Outcome**
- 11 students from Spring 2022 RX318 course
 - Summer 2022 final grade breakdown: A = 1; A- = 1; B = 4; B- = 2; C = 3
 - 10 students earned final course grade C or higher in PDA 1; 1 earned a final course grade of D
 - 6 students earned final course grade C or higher in PDA 2; 4 earned a final course grade of D; 1 held back due to poor performance in other courses

PHARMACOTHERAPEUTICS



Remediation Process



Post-Exam Reflection Survey

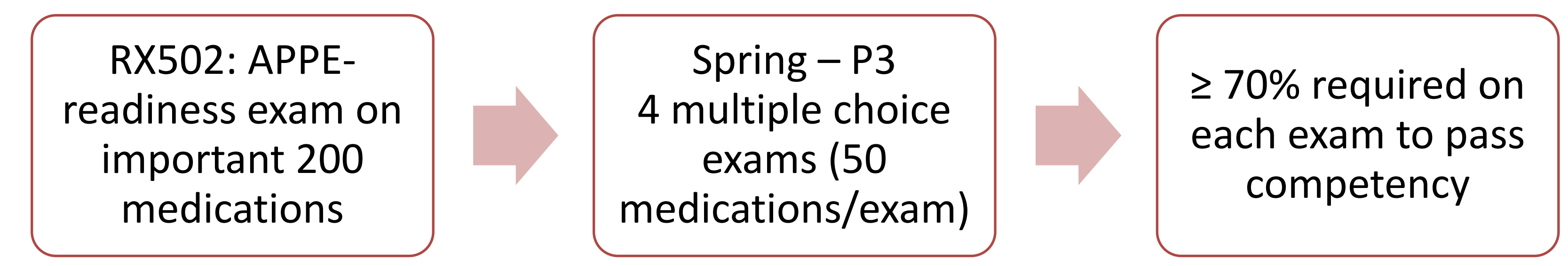
- Major Components**
- Study Technique
 - Time, approach, passive vs active
 - Course Attendance
 - Assignment completion
 - Pre-work/post-work for each topic
 - Reflections
 - Confidence in preparation
 - Contributing factors to exam performance
 - Expected score based upon preparation
 - SMART goal development

Student Progress and Reflection

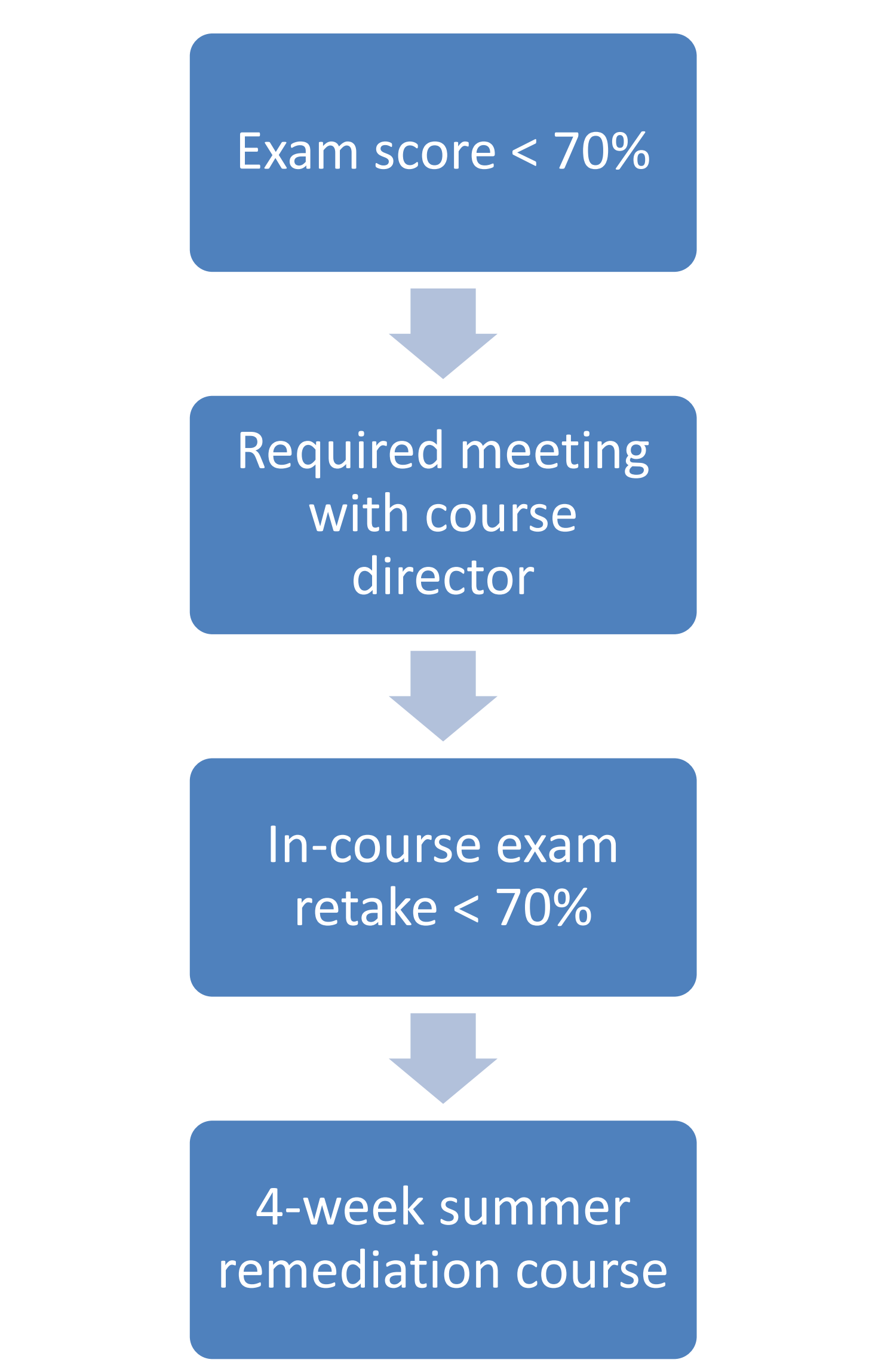
Spring 2022	≥ 1 Exam < 70%	$\geq 70\%$ on following Exam	≥ 2 non-passing Exams
T2	20/100 (20%)	15/20 (75%)	6/100 (6%)
T4	18/100 (18%)	17/18 (94%)	0/100 (0%)
Total	38/200 (19%)	32/38 (84%)	6/200 (3%)

- Based on preparation and study efforts, approximately 30% of students reported obtaining an expected exam score
- Common self-identified contributing factors to low exam performance
 - Careless mistakes
 - Overthinking
 - Test anxiety
 - Prioritization of other courses or activities
 - Inadequate study time
 - Personal reasons

INTRODUCTION TO ROTATIONS



Remediation Process



Remediation Components

- Meeting with course director
- Strengths and opportunities report from ExamSoft
- Student reflection on time spent, study habits, and source of information utilized to create study materials
- Review of video on tips for studying important 200 medications
- Identification of at least 1 new study technique that will be applied to future exams
- Required attendance at exam review sessions
 - 50 minutes live session
 - Active learning (games, crossword puzzles, question writing)

Spring 2022 RX502			
Exam 1 < 70%	Exam 2 < 70%	Exam 3 < 70%	Exam 4 < 70%
23/99 (23%)	18/99 (18%)	7/99 (7%)	5/99 (5%)
Exam 1 Retake $\geq 70\%$	Exam 2 Retake $\geq 70\%$	Exam 3 Retake $\geq 70\%$	Exam 4 Retake $\geq 70\%$
20/23 (87%)	13/18 (72%)	6/7 (86%)	3/4 (75%)

CONCLUSIONS

- Three distinct approaches to in-course remediation improves pass rate
- In-person meetings with course instructor or course director individualizes approach and faculty share activities and methods to improve active and applied learning