

SUNY Downstate College of Medicine
Integrated Pathways Curriculum, Class of 2023

Unit 1: Human Structure and Function

August 12 – October 4, 2019

The game's afoot: Follow your spirit... (W. Shakespeare, Henry V)

UNIT 1: Human Structure and Function

Calendar for 2019

We are pleased to offer a preview of the Unit 1 calendar for the Integrated Pathways Curriculum at SUNY Downstate.

- **This version of the calendar is current as of June 3, 2019**, but there may be changes – including the dates and times of activities or assessments – before or after implementation of the Unit.
- Any future changes to the calendar are likely to be minor, and the dates and times for most activities will not change.
- The calendar will be available online via the *Leo* system in early August, and we hope to send you a link to the online version before Orientation begins. You'll be using the online version extensively throughout the Foundations Units.
- Any changes or updates will be included in the online version.
- We hope that this preview is helpful, and we look forward to meeting you at Orientation on Monday August 5th. We are pleased and privileged to be working with you in Unit 1.
- Please feel free to contact me with any questions or concerns – keith.williams@downstate.edu

Dr. Keith Williams
Distinguished Teaching Professor
on behalf of the Unit 1 faculty & staff



UNIT 1

Systems Overview: Human Structure and Function

2019

January							February							March							April						
Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa
		1	2	3	4	5						1	2						1	2		1	2	3	4	5	6
6	7	8	9	10	11	12	3	4	5	6	7	8	9	3	4	5	6	7	8	9	7	8	9	10	11	12	13
13	14	15	16	17	18	19	10	11	12	13	14	15	16	10	11	12	13	14	15	16	14	15	16	17	18	19	20
20	21	22	23	24	25	26	17	18	19	20	21	22	23	17	18	19	20	21	22	23	21	22	23	24	25	26	27
27	28	29	30	31			24	25	26	27	28			24	25	26	27	28	29	30	28	29	30				
														31													
May							June							July							August						
Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa
			1	2	3	4						1		1	2	3	4	5	6					1	2	3	
5	6	7	8	9	10	11	2	3	4	5	6	7	8	7	8	9	10	11	12	13	4	5	6	7	8	9	10
12	13	14	15	16	17	18	9	10	11	12	13	14	15	14	15	16	17	18	19	20	11	12	13	14	15	16	17
19	20	21	22	23	24	25	16	17	18	19	20	21	22	21	22	23	24	25	26	27	18	19	20	21	22	23	24
26	27	28	29	30	31		23	24	25	26	27	28	29	28	29	30	31				25	26	27	28	29	30	31
							30																				
September							October							November							December						
Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa
1	2	3	4	5	6	7				1	2	3	4					1	2		1	2	3	4	5	6	7
8	9	10	11	12	13	14	6	7	8	9	10	11	12	3	4	5	6	7	8	9	8	9	10	11	12	13	14
15	16	17	18	19	20	21	13	14	15	16	17	18	19	10	11	12	13	14	15	16	15	16	17	18	19	20	21
22	23	24	25	26	27	28	20	21	22	23	24	25	26	17	18	19	20	21	22	23	22	23	24	25	26	27	28
29	30						27	28	29	30	31			24	25	26	27	28	29	30	29	30	31				

Orientation August 5 to 9, 2019

Unit 1: August 12 to
October 4, 2019

Unit 2 runs October 7
through December 20

UNIT 1

Key to Modalities



Class Information & Discussion



Lecture



Problem-Based Learning (PBL)



Clinical Skills (CS) Small Group



Clinical Skills (CS) Lab



Radiology Lab (RRE)



Patient-Oriented Problem Solving (POPS)



Patient Presentation



Gross Anatomy Lab



Histology/Histopathology Lab



Independent Learning activity



Formative Assessment *



Summative Assessment



Clinical Skills in Practice

Please note that some activities (e.g., most Lectures) include the entire class. Other activities (e.g., PBL, CS Small Group, CS Lab, RRE, POPS, Gross Anatomy Lab) typically include half the class or some other division, e.g., one quarter of the class, in any given session. Those sessions are repeated, either on the same day or on different days, so as to eventually encompass the entire class. For example, Ms. Alvarez Session 1 (PBL, # 2) is taken by Half I of the class on the morning of August 12th and by Half II of the class on the afternoon of the same day; the Thorax anatomy lab (# 21) is taken by half of Half I (a quarter of the class) at 10:00 a.m. on August 20th, by the other half of Half I at 11:00 a.m., and by Half II at 12:00 noon or 2:30 p.m. that day. A particular student will only be in Half I or Half II, and we'll let you know your final assignments during Orientation Week.

All sessions have a Unique ID number shown in blue (1, 2, 3, 119, 5, 7, 6, etc.). The numbers are not necessarily in sequence — they are for reference and are key for calendaring and administrative support.

* Weekly formative assessments open on Friday and are due by 9 a.m. the following Tuesday. The scores do not count toward the Unit grade, but formative assessments are a required activity and a very valuable study tool, and are part of the Professionalism competency.

Week 1

Week 1		Half I	Half II	Half I	Half II	Half I	Half II	Half I	Half II	Half I	Half II
2019		Monday August 12		Tuesday August 13		Wednesday August 14		Thursday August 15		Friday August 16	
8:00	8:00 a.m.										
8:30	8:30 a.m.										
9:00	9:00 a.m.	1 Unit 1 Overview		119 Vitals are Vital		111 Autonomic Nervous System		31 Ms. Alvarez		114 General Discussion; Orientation to POPS	
9:30	9:30 a.m.										
10:00	10:00 a.m.	2 Ms. Alvarez		5 Principles of Circulation		8 Regulation of the Cardiovascular System		Session 2		16 Acute Regulation of Cardiovascular Function	
10:30	10:30 a.m.										
11:00	11:00 a.m.	Session 1				E00 ExamSoft practice					
11:30	11:30 a.m.										
12:00	12:00 p.m.			7 Cardiac Function				221 Circulation in Specific Organs			
12:30	12:30 p.m.									STUDY TIME	
13:00	1:00 p.m.					104 Autonomic signaling					
13:30	1:30 p.m.	3 Introduction to the Medical Encounter						31 Ms. Alvarez			
14:00	2:00 p.m.			6 Vital Signs		9 The Cardiac Exam					
14:30	2:30 p.m.	2 Ms. Alvarez						Session 2			
15:00	3:00 p.m.										
15:30	3:30 p.m.	Session 1		6 Vital Signs		9 The Cardiac Exam					
16:00	4:00 p.m.										
16:30	4:30 p.m.										
17:00	5:00 p.m.										

Weekly Formative Assessments

Independent Learning				77a Money Matters 1				222 Signal Transduction			

Week 2		Half I	Half II	Half I	Half II	Half I	Half II	Half I	Half II	Half I	Half II	
2019		Monday August 19		Tuesday August 20		Wednesday August 21		Thursday August 22		Friday August 23		
8:00	8:00 a.m.											
8:30	8:30 a.m.											
9:00	9:00 a.m.	18 Principles of Respiration – Breathing & Ventilation		25 Principles of Resp. Gas Exchange, Transport and Regulation		62 Signaling & Resting Membrane Potential		32 Ms. Alvarez Session 3	28 Respiration	13 Principles of Fluid Balance		
9:30	9:30 a.m.											
10:00	10:00 a.m.	19 The Patient-Centered Medical Interview	21 Thorax GA	10 Echo	63 The Action Potential and Clinical Correlates					15 Overview of the Kidneys		
10:30	10:30 a.m.											
11:00	11:00 a.m.				21 Thorax GA	64 Synaptic Transmission						
11:30	11:30 a.m.											
12:00	12:00 p.m.			21 Thorax GA			11 Patient Presentation					
12:30	12:30 p.m.											
13:00	1:00 p.m.	20 Principles of Respiration – Pulmonary Dynamics		80 Smooth Muscle				28 Respiration	32 Ms. Alvarez Session 3	STUDY TIME		
13:30	1:30 p.m.											
14:00	2:00 p.m.			23 The Respiratory Exam			23 The Respiratory Exam					
14:30	2:30 p.m.	10 Echo	19 The Patient-Centered Medical Interview		21 Thorax GA							
15:00	3:00 p.m.											
15:30	3:30 p.m.					23 The Respiratory Exam						
16:00	4:00 p.m.											
16:30	4:30 p.m.			23 The Respiratory Exam								
17:00	5:00 p.m.											

8:30 p.m.	Clinical Skills in Practice – Vital Signs – around 8:30 to 9:30 p.m., 12 students per day, Monday to Friday, clinical site: TBD										
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Independent Learning		121 Physiological Properties of Cells					
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Weekly Formative Assessments

Week 3

Week 3		Half I	Half II	Half I	Half II	Half I	Half II	Half I	Half II	Half I	Half II	
2019		Monday August 26		Tuesday August 27		Wednesday August 28		Thursday August 29		Friday August 30		
8:00	8:00 a.m.											
8:30	8:30 a.m.											
9:00	9:00 a.m.	223 Pharmacology and Therapeutics		224 Drug-Receptor Interactions		225 Pharmacokinetics & Drug Metabolism 1		130 Professionalism		76 How to Learn GA		
9:30	9:30 a.m.											
10:00	10:00 a.m.	38 Mr. Johnson Session 1	26 Homeo- stasis:	112 Capillaries, Lymph and Edema		226 Pharmacokinetics & Drug Metabolism 2		125 Introduction to Musculoskeletal & PNS				
10:30	10:30 a.m.											
11:00	11:00 a.m.		128 Modalities and Assessments						234 Anatomy Intro	231 Histology Intro		
11:30	11:30 a.m.											
12:00	12:00 p.m.					227 Pharmacology and Therapeutics		228 Pharmacokinetics		231 Histology Intro	234 Anatomy Intro	
12:30	12:30 p.m.			29 Abdo men								
13:00	1:00 p.m.					STUDY TIME						
13:30	1:30 p.m.	26 Homeo- stasis:			29 Abdo men							
14:00	2:00 p.m.			27 The Abdo minal Exam				29 Abdo men	27 The Abdo minal Exam			
14:30	2:30 p.m.		38 Mr. Johnson Session 1									
15:00	3:00 p.m.				29 Abdo men							
15:30	3:30 p.m.		38 Mr. Johnson Session 1	27 The Abdo minal Exam				27 The Abdo minal Exam				
16:00	4:00 p.m.											
16:30	4:30 p.m.											
17:00	5:00 p.m.											

Weekly Formative Assessments

8:30 p.m.	Clinical Skills in Practice – Vital Signs – around 8:30 to 9:30 p.m., 12 students per day, Monday to Friday, clinical site: TBD									
Independent Learning	222 Signal Transduction				235 Receptors Revisited					

Week 4		Half I		Half II		Half I		Half II		Half I		Half II		Half I		Half II	
2019		Monday September 2		Tuesday September 3		Wednesday September 4		Thursday September 5		Friday September 6							
8:00	8:00 a.m.																
8:30	8:30 a.m.																
9:00	9:00 a.m.	Labor Day		37 Principles of Diagnostic Imaging 1		40 Principles of Diagnostic Imaging 2		48 Mr. Johnson		232 Smooth muscle & blood vessels		50 Shoulder					
9:30	9:30 a.m.							Session 2									
10:00	10:00 a.m.			232 Smooth muscle & blood vessels		201 GA Lab UL 1		34 Bones & Joints						44 Back & Spine			
10:30	10:30 a.m.																
11:00	11:00 a.m.																
11:30	11:30 a.m.																
12:00	12:00 p.m.							41 Vertebral Column, Spinal Cord and PNS									
12:30	12:30 p.m.									D03 Half II → Half I							
13:00	1:00 p.m.							D02 Half I → Half II		204 GA Lab UL 4		48 Mr. Johnson					
13:30	1:30 p.m.					D01 Half II → Half I				203 GA Lab UL 3		Session 2					
14:00	2:00 p.m.					202 GA Lab UL 2		240 Bio-stats		240 Bio-stats							
14:30	2:30 p.m.																
15:00	3:00 p.m.																
15:30	3:30 p.m.							240 Bio-stats		240 Bio-stats		D04 Half I → Half II					
16:00	4:00 p.m.																
16:30	4:30 p.m.																
17:00	5:00 p.m.																

8:30 p.m.	Clinical Skills in Practice – Vital Signs – around 8:30 to 9:30 p.m., 12 students per day, Monday to Friday, clinical site: TBD
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Independent Learning			39 Terry Survives (Biostats)		
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Weekly Formative Assessments

Week 5

Week 5		Half I	Half II	Half I	Half II	Half I	Half II	Half I	Half II	Half I	Half II
2019		Monday September 9		Tuesday September 10		Wednesday September 11		Thursday September 12		Friday September 13	
8:00	8:00 a.m.										
8:30	8:30 a.m.										
9:00	9:00 a.m.	68 The Neuromuscular Junction		81 Excitation–Contraction Coupling In Skeletal Muscle		120 Sensory Afferents & Spinal Cord Processing		69 Mr. Johnson		55 Elbow and Hand	
9:30	9:30 a.m.							Session 3			
10:00	10:00 a.m.	60 Professionalism	205 GA Lab UL 5 & Back/spine	85 Physiological Properties of Skeletal Muscle		79 Neural control of movement				STUDY TIME	
10:30	10:30 a.m.										
11:00	11:00 a.m.					115 Assessment Week - Discussion, Q & A					
11:30	11:30 a.m.										
12:00	12:00 p.m.	STUDY TIME		D05 Half II → Half I							
12:30	12:30 p.m.										
13:00	1:00 p.m.			206 GA Lab UL 6 & Back/spine		D06 Half I → Half II		75 Upper Limb		69 Mr. Johnson	
13:30	1:30 p.m.									Session 3	
14:00	2:00 p.m.			217 Upper Limb		217 Upper Limb		207 GA Lab UL 7		D07 Half II → Half I	
14:30	2:30 p.m.									208 GA Lab UL 8	
15:00	3:00 p.m.	60 Professionalism								75 Upper Limb	
15:30	3:30 p.m.			217 Upper Limb		217 Upper Limb					
16:00	4:00 p.m.										
16:30	4:30 p.m.										
17:00	5:00 p.m.									D08 Half I → Half II	

8:30 p.m.

Clinical Skills in Practice – Vital Signs – around 8:30 to 9:30 p.m., 12 students per day, Monday to Friday, clinical site: TBD

Independent Learning

Weekly Formative Assessments

Week 6

Week 6		Half I	Half II	Half I	Half II	Half I	Half II	Half I	Half II	Half I	Half II											
2019		Monday September 16		Tuesday September 17		Wednesday September 18		Thursday September 19		Friday September 20												
8:00	8:00 a.m.																					
8:30	8:30 a.m.																					
9:00	9:00 a.m.	107 Connective tissue & secretory processes		122 Neuromuscular Disease 1		71 Hip & Thigh		86 Mr. Carter Session 2	233 Nerve & muscle	D12 Half I → Half II												
9:30	9:30 a.m.									110 Bone	213 GA Lab LL 5											
10:00	10:00 a.m.	74 Mr. Carter Session 1	209 GA Lab LL 1	123 Neuromuscular Disease 2		108 Bone Structure and Function IL					STUDY TIME											
10:30	10:30 a.m.			132 Patient Presentation																		
11:00	11:00 a.m.																					
11:30	11:30 a.m.																					
12:00	12:00 p.m.					109 Bone Development & Homeostasis IL				D13 Half II → Half I												
12:30	12:30 p.m.							D11 Half II → Half I														
13:00	1:00 p.m.			233 Nerve & muscle		D10 Half I → Half II		212 GA Lab LL 4	86 Mr. Carter Session 2													
13:30	1:30 p.m.																					
14:00	2:00 p.m.	D09 Half II → Half I				218 Back, spine & Hip																
14:30	2:30 p.m.	210 GA Lab LL 2	74 Mr. Carter Session 1																			
15:00	3:00 p.m.																					
15:30	3:30 p.m.																					
16:00	4:00 p.m.		218 Back, spine & Hip		218 Back, spine & Hip																	
16:30	4:30 p.m.																					
17:00	5:00 p.m.																					

Weekly Formative Assessments

Independent Learning		77b Money Matters 2						77c Money Matters 3			

Week 7

Week 7		Half I	Half II	Half I	Half II	Half I	Half II	Half I	Half II	Half I	Half II
2019		Monday September 23		Tuesday September 24		Wednesday September 25		Thursday September 26		Friday September 27	
8:00	8:00 a.m.										
8:30	8:30 a.m.										
9:00	9:00 a.m.	94 Knee and Ankle				D14 Half I → Half II		99 Mr. Carter Session 3 & Unit Survey	92 Lower Limb	Study Day	
9:30	9:30 a.m.					92 Lower Limb	215 GA Lab				
10:00	10:00 a.m.	126 Simulated Patient Interview	110 Bone	124 Neuromuscular Disease							
10:30	10:30 a.m.										
11:00	11:00 a.m.										
11:30	11:30 a.m.										
12:00	12:00 p.m.	SP1 1-on-1 Standardized Patient exercise. Selected students (TBD), 15 min each									
12:30	12:30 p.m.							216 GA Lab	99 Mr. Carter Session 3 & Unit Survey		
13:00	1:00 p.m.										
13:30	1:30 p.m.										
14:00	2:00 p.m.			220 HDPE	219 Lower Limb	219 Lower Limb	220 HDPE				
14:30	2:30 p.m.	214 GA Lab	126 Simulated Patient Interview								
15:00	3:00 p.m.										
15:30	3:30 p.m.					220 HDPE	219 Lower Limb	219 Lower Limb	220 HDPE		
16:00	4:00 p.m.										
16:30	4:30 p.m.										
17:00	5:00 p.m.										

Weekly Formative Assessments

Independent Learning					

Week 8

Week 8		Half I	Half II	Half I	Half II	Half I	Half II	Half I	Half II	Half I	Half II	
2019		Monday September 30		Tuesday October 1		Wednesday October 2		Thursday October 3		Friday October 4		
8:00	8:00 a.m.											
8:30	8:30 a.m.											
9:00	9:00 a.m.					Study Day						
9:30	9:30 a.m.			E02 & E03 Practical Exams								
10:00	10:00 a.m.	E01 PC OSCE Exam					E04 MK Essay Exam	E06 & E07 NBME & CS MCQ Exams				
10:30	10:30 a.m.											
11:00	11:00 a.m.											
11:30	11:30 a.m.											
12:00	12:00 p.m.						E05 PC Essay Exam					
12:30	12:30 p.m.											
13:00	1:00 p.m.											
13:30	1:30 p.m.											
14:00	2:00 p.m.											
14:30	2:30 p.m.											
15:00	3:00 p.m.											
15:30	3:30 p.m.											
16:00	4:00 p.m.											
16:30	4:30 p.m.											
17:00	5:00 p.m.											
Independent Learning												