



College of Natural Science  
MICHIGAN STATE UNIVERSITY

## PSL 432 Human Physiology II Syllabus, 4 Credits

**Course Modality:** In-person

**Lectures:** 1:50-2:40 PM on Monday, Wednesday, and Friday in S107 South Kedzie Hall.

**Recitations:** Wednesday or Thursday depending on registered section (see page 2).

**Course platforms:** Lecture materials and recordings will be available online through [D2L](#).

**Course Description:** This course covers molecular, cellular, tissue, and organ-level processes that underlie physiological control of the renal, immune, gastrointestinal, endocrine, and reproductive systems.

**Safety Considerations Due to Covid-19:** Follow MSU's Covid-19 Directives to keep our community safe. We intend for the course modality to remain in-person. Should the public health situation change and make it unsafe to hold in-person classes, the course will pivot to an online format.

**Textbook:** [Human Physiology: From Cells to Systems](#), by Lauralee Sherwood, Cengage Publishing; 9th edition. **Printed version:** ISBN #9781305616721. **Digital Version:** [Cengage.com](#). 4-month subscription ISBN #9780357700006, or 12-month subscription ISBN #9780357700013. Course Key (MTPNNRXZRCVV).

**Required Technologies:** Students must have a computer or tablet and high-speed internet access that allows for online accessing of lecture and recitation materials and quizzes on D2L. Alternatively, students can use computers available at the [MSU Computer Labs](#).

### **Technical Assistance:**

MSU IT Service Desk at 517-432-6200, 884-678-6200, or [ithelp@msu.edu](mailto:ithelp@msu.edu).

D2L Help Site at <https://help.msu.edu> or <https://help.d2l.msu.edu>

Zoom help at MSU IT Service Desk or <https://support.zoom.us/hc/en-us>

**Instructors:** PSL 432 is *team-taught* by 3 instructors. **Dr. Olson is the Course Coordinator** and is responsible for organizing the course content, examinations, and grading. If you have questions about the course, please direct them to [Dr. Olson](#). If you have questions about lecture content, please direct them to the instructor who taught that particular lecture/concept.

Instructor	Email	Office Hours	Location
<b>Karl Olson, Ph.D.</b> Course Coordinator Instructor: GI, Endo Pronouns: he/him/his	<a href="mailto:olsonla@msu.edu">olsonla@msu.edu</a>	Tuesday 10:00 -11:00 AM, Or by appointment	3164 BPS bldg

<b>Nara Parameswaran, Ph.D.</b> Instructor: Renal, Immunology Pronouns: he/him/his	<a href="mailto:narap@msu.edu">narap@msu.edu</a>	Jan 10 – Feb 28 Tuesday 4:00-5:00 PM, Or by appointment	4163 BPS bldg
<b>Susanne Mohr, Ph.D.</b> Instructor: Repro Pronouns: she/her/hers	<a href="mailto:mohrs@msu.edu">mohrs@msu.edu</a>	TBA	3165 BPS bldg

### **Recitations & Teaching Assistants:**

Please attend your registered recitation section. Attending a different recitation section requires Dr. Olson's approval.

Sec #	Day	Time	Room	TA
001	W	10:20 AM	Chemistry 127	Thomas Turkette <a href="mailto:turkette@msu.edu">turkette@msu.edu</a>
002	W	11:30 AM	Chemistry 183	
004	Th	11:30 AM	Biochemistry 111	Gokul Murali <a href="mailto:muraligo@msu.edu">muraligo@msu.edu</a>
005	Th	12:40 PM	Chemistry 183	
003	W	3:00PM	Natural Resources 1	Brett Trombley <a href="mailto:Trombl61@msu.edu">Trombl61@msu.edu</a>
006	Th	6:30 PM	Biomedical & Physical Science 1420	

### **Attendance Policy:**

- **Lectures:** Students are strongly encouraged to attend in-person lectures so that they can engage with the course content and ask questions. Attendance, however, is not required at lectures and will not be tracked.
- **Recitations:** Students are expected to attend weekly in-person recitation sections. Attendance is required to complete the weekly recitation quiz.

### **Access Course Materials and Recordings via D2L:**

The [D2L](#) folder “**SS23-PSL-432 - Human Physiology II–ALL Sections**” contains:

- Lecture and Recitation Materials
- Lecture recording links
- Lecture Quizzes and Practice Exam Quizzes (Graded)
- Additional study materials
- Earned Points

**Lecture Format:**

- There is a **total of 40 in-person lectures**. Lectures are recorded and posted to D2L. If there are glitches in the lecture recording, we will post an old lecture recording.
- There are **5 graded questions per lecture on D2L** that you need to answer after you have watched a lecture. **These lecture questions will not be available for grading after 3 pm on the Thursday prior to the Topic Exam.** There are a total of 40 lecture questions per topic i.e., Renal, Immuno, GI, Endo, or Repro.
- It is recommended that you download lecture materials from D2L prior to attending or watching the lecture and take notes “in your own words” to facilitate your personal understanding.
- All course materials are the copyrighted property of the course instructors and Michigan State University. Students are therefore not permitted to make, post, or otherwise distribute recordings of lectures or other course material without the advance written permission of the course instructor.

**Recitation Format:**

- There is a **total of 14 in-person recitations** that focus on challenging concepts from the previous lectures. Recitations will enable you to “actively exercise” concepts to enhance your learning.
- **Download Recitation materials and work through them PRIOR to attending the Recitation.** Preparing ahead of time will help you get the most of out the recitation.
- **There is a 10-point quiz (5 multiple-choice questions) at the end of each recitation section over the material that is covered in lectures and recitation.**

**Honors Option (Only for Honors College Students):**

Contact [Dr. Olson](#) if you want to complete an Honors Option in PSL 432. Any PSL 432 instructor may supervise an Honors Option and selection is based on the student’s and instructor’s interest. Typically, it involves writing an 8–10-page paper on a topic agreed upon by you and an instructor. The online Honors Option Agreement Form must be submitted by the end of the day on February 17<sup>th</sup> to be eligible.

**Tutors:** Contact [Dr. Olson](#) if you are interested in working with a tutor.

**GRADING**

There are 770 total points in this class. The points come from:

Assessment	Points	# of questions	Notes	% of grade
40 Lecture Quizzes	100	5 per lecture	0.5 pt per question, 40 lectures	13%
10 Practice Exams	100	10 per practice exam	1 pt per question, 2 practice exams per topic	13%
14 Recitation Quizzes	110	5 per quiz	2 pts per question, 14 recitation quizzes, drop 3 lowest scoring quizzes.	14.3%
Topic Exam 1	90	30 questions	3 pts per question	11.7%
Topic Exam 2	90	30 questions	3 pts per question	11.7%
Topic Exam 3	90	30 questions	3 pts per question	11.7%
Topic Exam 4	90	30 questions	3 pts per question	11.7%
Topic Exam 5	90	30 questions	3 pts per question	11.7%
Participation pts	10		Course surveys	1.3%
<b>Total Points</b>	<b>770</b>			<b>100%</b>

Please see Quiz and Exam Schedule on pages 10 through 12.

### Lecture Quizzes (100 points)

- There will be 40 lecture quizzes: one quiz per lecture.
- The quiz can be taken at any time during a topic domain but **must be taken prior 3 PM on the Thursday before the given Topic Exam to receive a grade.**
- There is a 30-minute time limit once a quiz is activated.
- Each lecture quiz will have 5 questions, each worth 0.5 points.

### Practice Exams (100 points)

- There will be 2 practice exams per topic domain (e.g. Renal, Immuno, GI, Endo, or Repro) for a total of 10 exams.
- Each practice exam is offered during a **3-day** "release window" during which you can take the exam twice. After the release window closes the exam CANNOT be made up.
- The dates the practice exam opens and closes will be posted on the D2L course calendar.
- The practice exams are designed to reward you for studying the topic materials in a timely fashion. The questions are from previous PSL 432 exams.
- Each practice exam will have 10 multiple-choice questions, each worth 1 point.

### Recitation Quizzes (110 points)

- There will be a quiz after each recitation session for a total of 14 quizzes. The quizzes will be administered during the final 10 minutes of the recitation period.
- Quiz material will consist of material that you are required to prepare for recitation (e.g. worksheet, table) and that is **covered** during the recitation. **If you prepare for recitation and pay attention during recitation you should be able to do well on the quiz.**
- Each recitation quiz will have 5 multiple-choice questions, 2 points each.
- Your 3 lowest quiz scores will be dropped.
- No make-up recitation quizzes will be given.
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### Topic Exams (450 points)

- There will be 5 topic exams, each worth 90 points (450 points total)
- **Four of the topic exams are scheduled on Fridays (2/4, 2/25, 3/25, 4/15) during class time (1:50 to 2:40 pm).**
- **The fifth topic exam is schedule during finals week on Monday 5/2 from 3:00 to 3:50 pm.**
- Topic exams are 50 minutes long.
- Exams will be composed of 30 multiple-choice questions, each worth 3 points.

### Course Grades

- Grades will be determined by the percentage of points earned out of the total possible 770 points. Cutoffs for grades are based on a numerical value and are not rounded up. Example,  $770 \times 90\% = 693$  pts and scores just below that cutoff will the next lower grade.
- Students earning:
  - $\geq 90\%$  of possible points will receive a 4.0.
  - 89-80% of possible points will receive a 3.0 or better.
  - 79-70% of possible points will receive a 2.0 or better.
  - 69-60% of possible points will receive a 1.0 or better.

- In practice, the straight grading scale described above can be curved to adjust for yearly variations in test difficulty and class performance. The final grade curve will not be more rigorous than the straight grading scale and will be designed to help, not hurt, the student.
- Petitions to re-evaluate a course grade will be considered in writing only (e-mail) and must be submitted to Dr. Olson within one week after the beginning of the semester following completion of 2023 PSL 432, according to university guidelines.

#### Make-Up Exams:

- Make-Up Exams are only possible if a student has a legitimate health emergency (serious illness, not a cold) or serious extenuating circumstances (see grief absence policy below).
- **Documentation** of the emergency must be provided by a legitimate physician on their letterhead with their signature and contact information.
- **Contact [Dr. Olson](#) as soon as possible if you must miss an exam due to a serious emergency, ideally before the exam or at latest within 24 hr of the exam. Make-ups will be negotiated solely with Dr. Olson.**
- Note that a make-up exam may not be the same as the exam given during the normal exam period. Instructors reserve the right to use an alternate exam.

#### Policy on Overlapping Finals:

- This course follows the [MSU Final Exam Policy](#)
- According to University policy you may be eligible to take the final exam at an alternative time **IF** a) you have 2 final exams scheduled at the same time; **OR** b) you have 3 final exams scheduled on the same calendar day.
- If either of these situations applies to you, contact [Dr. Olson](#) **BEFORE THE FINAL WEEK OF CLASSES** and he will schedule an alternate time for you to take the final exam.
- Note: when a conflict as described above arises because of use of a common final (as in some multi-section chemistry courses), the course utilizing the common final will normally be responsible for scheduling an alternate for those students for whom conflicts arise (as per official MSU exam scheduling policy.)

#### Rules for Exams:

- No questions on content will be answered during the exams.
- Exams will be given in-person. Exam results will be posted to the D2L Gradebook usually within 1 week of the exam date. It is the responsibility of the student to assure that his/her exam was graded correctly.
- Any appeals for additional credit on an exam because of a scoring error or student appeal to re-evaluate individual questions must be submitted in writing (email) to the relevant instructor and Dr. Olson within 1wk of the time exam results are distributed. Appeals must provide justification for why the scoring issue or alternate answer deserves to receive credit.

#### Accommodations for Students with Disabilities:

- Michigan State University is committed to providing equal opportunity for participation in all programs, services and activities. Requests for accommodations by persons with disabilities may be made by contacting the Resource Center for Persons with Disabilities (RCPD) via the [RCPD website](#) or via phone (517-884-7273). Once your eligibility for an accommodation has been determined, you will be issued a verified individual services accommodation ("VISA") form. Students **must** be registered with RCPD in order to obtain a VISA

- Students must inform [Dr. Olson](#) regarding any accommodations needed at the start of the semester and must provide their RCPD-issued VISA.
- Accommodation arrangements must be made at least 2 weeks prior to the exam. Requests received after this date will be honored whenever possible but cannot be guaranteed.

**Learning Continuity Statement:** Should you become unable to attend class for an extended period due to documented health or personal issues contact [Dr. Olson](#) to discuss accommodations. If the prolonged absence exceeds the date when grades are due to the Registrar's Office, the student will receive an Incomplete (I).

**Course Continuity Statement:** Should a member of the PSL 432 Instructor team be required to be absent for an extended period, the other instructors will deliver their course content and cover their office hours. If this occurs, students will be notified of which Instructor is now responsible for the content.

**Accommodations for COVID-19 and other Serious Health Conditions:**

- **COVID-19:** If you have been sick with COVID-19 [symptoms](#), have tested positive for COVID-19, or have been potentially [exposed](#) to someone with COVID-19 please follow CDC guidance to [self-isolate or stay home](#). Accommodations will be made for any student who must miss class due to COVID-19 illness or self-isolation so that it will not harm their performance or put them at a disadvantage in the class. Contact [Dr. Olson](#) to arrange accommodations.
- **Other Serious Health Conditions:** Contact [Dr. Olson](#) to discuss and arrange accommodations.

**Academic Honesty:**

- Article 2.3.3 of the [Academic Freedom Report](#) states "The student shares with the faculty the responsibility for maintaining the integrity of scholarship, grades and professional standards." In addition, the Department of Physiology adheres to the policies on academic honest as specified in General Student Regulations 1.0, *Protection of Scholarship and Grades*; the All-University Policy on *Integrity of Scholarship and Grades*; and Ordinance 17.00, Examinations.
- **You are expected to complete all quizzes, exams and the final without assistance from any source. Students who violate MSU rules may receive a penalty grade including, but not limited to, a failing grade on the quiz/exam/final or in the course.**

**Grief Absence Policy:**

Michigan State University is committed to ensuring that the bereavement process of a student who loses a family member during a semester does not put the student at an academic disadvantage in their classes. If you require a grief absence fill out a Grief Absence Request form no later than one week after knowledge of the circumstance. This form can be found at <https://reg.msu.edu/Forms/Stulnstr/Menu.aspx>. The college will then inform Dr. Olson, who will then work with you to make appropriate accommodations so that you are not penalized due to a verified grief absence.

Representative for the College of Natural Science: Heidi Purdy, [purdyh@msu.edu](mailto:purdyh@msu.edu)  
Representative for the Lyman Briggs College: Amy Martin, [mart1742@msu.edu](mailto:mart1742@msu.edu)

**Course and Instructor Evaluation:**

- The SIRS Online system will be used for evaluation of PSL 432
- Students are encouraged to submit their opinions of the course and individual instructors at the end of each semester via SIRS Online: <https://sirsonline.msu.edu>
- Students will be required to complete the SIRS Online form or indicate within that form that they decline to participate. Otherwise, final grades will be sequestered for seven days following the course.
- An “Opt Out” option is possible and Student anonymity is carefully protected.

**TIPS TO SUCCEED IN PSL 432:**

- 1) **READ** the chapter to be covered before each class so you are prepared for the lecture. Having some idea of the concepts will help you make the most of the lecture period.
- 2) **REVIEW** your notes *after each class and before the next class*. Spending an hour out of class for each hour in class will help immeasurably
- 3) **STAY CURRENT**: because each concept builds upon the one before, you need to keep up with the material. **DO NOT** wait until the day before an exam to study--- you will be lost.
- 4) **PUT IT INTO YOUR OWN WORDS**. Don't just passively look at lecture notes or listen to a lecture, that won't help you. **You** need to actively work with the content and format it in a way that will enable you to learn it. Past students suggest the following techniques to master the material:
  - Re-write and/or make your own slides that explain concepts in **your own** words.
  - Draw pictures or diagrams
  - Think about how a change (e.g. loss or gain of a receptor, cell, protein) would change function of a pathway or tissue function.
  - Write an essay to describe a concept
  - Explain a concept and/or teach it to a friend (this will test if you really know it)
  - Actively work with the material. Doing so will allow you to learn it at a much deeper level which is important because you need to be able to...
- 5) **INTEGRATE CONCEPTS**. Simply memorizing the notes will **not** enable you to pass this class. Really. You need to be able to deeply understand the pathways, mechanisms and **connect** them to other topics/mechanism.
- 6) **PRACTICE MULTIPLE CHOICE QUESTIONS**. The format of the exams/quizzes can sometimes trip students up at first. Practice with sample multiple choice questions in advance. Tips for this:
  - Carefully read the question. What is it asking for?
  - Examine **each** foil: is it true or false? Reason through why or why not.
  - Identify the right foil by understanding why the others are **not** right.
- 7) **ASK QUESTIONS**: Let your instructor or TA know if you are having trouble with a concept: we can't help if we don't know that there is a problem.

**LECTURE & RECITATION SCHEDULE:**

L# = Lecture Number (Dates in Red are Fridays)

- Note Recitation Grouping: Indicates the predicted lectures that will be covered during that weeks' recitation.

Dates	L#	Lecture Topic	Instructor	Reading	Recitation #
9-Jan	1	Renal anatomy and function	Parameswaran	p491-96	
11-Jan	2	Glomerular Filtration	Parameswaran	p496-505	
13-Jan	3	Glomerular filtration/Tubular Transport	Parameswaran	P63-78, p505-517	
16-Jan		Martin Luther King Day – No Class			
18-Jan	4	Tubular Transport			RECITATION 1 Jan 18/19 L#1-3
20-Jan	5	Urinary Excretion and Clearance	Parameswaran	p517-520	
23-Jan	6	Water and Sodium Balance	Parameswaran	p63-78, p535-547	
25-Jan	7	Water and Sodium Balance	Parameswaran	p507-517, 520-28, 535-547	RECITATION 2 Jan 25/26 L#4-6
27-Jan	8	Water and Sodium Balance	Parameswaran	p507-517, 520-28, 535-547	
30-Jan	9	Blood Composition & Hematopoiesis	Parameswaran	p380-85	
1-Feb	10	RBCs and Platelets	Parameswaran	p385-391; p395-396	RECITATION 3 Feb 1/2 L# 7,8
3-Feb		<b>Exam 1: Covers lectures 1 –8 1:50-2:40 pm</b>			<b>Renal Exam 1</b>
6-Feb	11	WBCs	Parameswaran	P392-394; 404-07, 415-431	
8-Feb	12	Immune Response	Parameswaran	p404-442	RECITATION 4 Feb 8/9 L#9-11
10-Feb	13	Immune Response	Parameswaran	P413-416, p395-400	
13-Feb	14	Complement System and Hemostasis	Parameswaran	P408-412, p438-441	
15-Feb	15	Inflammation, Wound Healing and Repair			RECITATION 5 Feb 15/16 L#12-14
17-Feb	16	Microbiome	Parameswaran	P613-614	
20-Feb	17	Overview of gastrointestinal physiology	Olson	p565-570	
22-Feb	18	Regulation and integration of gut function	Olson	p113-129, 233-241, 571-573	RECITATION 6 Feb 22/23



					L# 15,16
24-Feb		<b>Exam 2: Covers lectures 9 – 16 1:50-2:40 pm</b>			<b>Immuno Exam 2</b>
27-Feb	19	Gastrointestinal motility	Olson	p573-582, 598-599, 610-613	
1-Mar	20	Gastrointestinal secretion	Olson	p574-575, 582-592	RECITATION 7 Mar 1/2 L# 17-19
3-Mar	21	Gastrointestinal secretion	Olson	p574-575, 582-592	
<b>March 6<sup>th</sup>-10<sup>th</sup></b>			<b>Spring Break</b>		
13-Mar	22	Digestion and absorption	Olson	p60-77, 358-360, 595-610	
15-Mar	23	Digestion and absorption	Olson	p60-77, 358-360, 595-610	RECITATION 8 Mar 15/16 L# 20-22
17-Mar	24	Regulation of food intake	Olson	p685-701, 619-627	
20-Mar	25	General Endocrinology Principles	Olson		
22-Mar	26	Hypothalamus and pituitary I	Olson	p646-652	RECITATION 9 Mar 22/23 L# 23,24
24-Mar		<b>Exam 3: Covers lectures 17 – 24 1:50-2:40 pm</b>			<b>GI Exam 3</b>
27-Mar	27	Hypothalamus and pituitary II, Growth hormone	Olson	p652-660	
29-Mar	28	Thyroid	Olson	p665-671	RECITATION 10 Mar 29/30 L# 25-27
31-Mar	29	Adrenal	Olson	p672-682	
3-Apr	30	Endocrine pancreas & whole body metabolism	Olson	p685-701, 619-627	
5-Apr	31	Endocrine pancreas & whole body metabolism	Olson		RECITATION 11 Apr 5/6 L# 28-30
7-Apr	32	Calcium and phosphate metabolism	Olson	p701-712	
10-Apr	33	Male Reproductive 1	Mohr	Readings on D2L	
12-Apr	34	Male Reproductive 2	Mohr	p716-723	RECITATION 12 Apr 12/13 L# 31/32
14-Apr		<b>Exam 4: Covers lectures 25 – 32 1:50-2:40 pm</b>			<b>ENDO Exam 4</b>
17-Apr	35	Female Reproductive 1	Mohr	p723-732	
19-Apr	36	Female Reproductive 2	Mohr	p736-752	RECITATION 13 Apr 19/20 L# 33-35

21-Apr	37	Fertilization	Mohr	p736-752	
24-Apr	38	Embryology	Mohr	p732-736	
26-Apr	39	Sexual Differentiation	Mohr	p752-763	RECITATION 14 Apr 26/27 L# 36-38
28-Apr	40	Pregnancy and Birth			
1-May		<b>Exam 5: Covers lectures 33 – 40 3-5 pm</b>			<b>REPRO Exam 5</b>

**QUIZ AND EXAM SCHEDULE:**

\*Lecture Quiz (LQ) – 5 questions per lecture, 30-minute limit, available once, taken any time. Lecture quizzes for a given topic are no longer available after 3 pm Thursday prior to the Topic Exam.

\*\*Practice Exam (PE) – 10 questions, 30-minute limit, repeated twice, must be taken during 3-day time window.

\*\*\*Recitation Quiz (RQ) – 5 questions, 10-minute limit, taken during recitation.

\*\*\*\*Topic Exam – 30 questions, 50-minute limit, taken during class period on Fridays.

Dates in Red are Fridays

Dates	Lecture #	Lecture Topic	Lecture Quiz* (5Q, 0.5 pt/Q)	Practice Exam** (10Q, 1 pt/Q)	Recitation Quiz*** (5Q, 2 pt/Q)	Topic Exam**** (30Q, 3 pt/Q)
9-Jan	1	Renal	LQ 1			
11-Jan	2	Renal	LQ 2			
13-Jan	3	Renal	LQ 3			
16-Jan		Holiday– No Class				
18-Jan	4	Renal	LQ 4	PE 1	RQ1 – L# 1-3 Jan 18/19	
20-Jan	5	Renal	LQ 5			
23-Jan	6	Renal	LQ 6			
25-Jan	7	Renal	LQ 7		RQ2 – L# 4-6 Jan 25/26	
27-Jan	8	Renal	LQ 8	PE 2		
30-Jan	9	Immuno	LQ 9			
1-Feb	10	Immuno	LQ 10		RQ3-L# 7,8 Feb 1/2	
3-Feb		<b>Exam 1</b>				Topic Exam 1 Renal-L#1-8
6-Feb	11	Immuno	LQ 11			

## PSL 432

## Spring Semester 2023

8-Feb	12	Immuno	LQ 12	PE 3	RQ4-L#9-11 Feb 8/9	
10-Feb	13	Immuno	LQ 13			
13-Feb	14	Immuno	LQ 14			
15-Feb	15	Immuno	LQ 15		RQ5-L#12-14 Feb 15/16	
17-Feb	16	Microbiome	LQ 16	PE 4		
20-Feb	17	GI	LQ 17			
22-Feb	18	GI	LQ 18		RQ6-L#15,16 Feb 22/23	
24-Feb		Exam 2				Topic Exam 2 Immuno-L#9-16
27-Feb	19	GI	LQ 19			
1-Mar	20	GI	LQ 20	PE 5	RQ7-L#17-19 Mar 1/2	
3-Mar	21	GI	LQ 21			
6-10-Mar			SPRING BREAK			
13-Mar	22	GI	LQ 22			
15-Mar	23	GI	LQ 23		RQ8-L#20-22 Mar 15/16	
17-Mar	24	GI	LQ 24	PE 6		
20-Mar	25	ENDO	LQ 25			
22-Mar	26	ENDO	LQ 26		RQ9-L#23,24 Mar 22/23	
24-Mar		Exam 3				Topic Exam 3 GI-L#17-24
27-Mar	27	ENDO	LQ 27			
29-Mar	28	ENDO	LQ 28	PE 7	RQ10-L#25-27 Mar 29/30	
31-Mar	29	ENDO	LQ 29			
3-Apr	30	ENDO	LQ 30			
5-Apr	31	ENDO	LQ 31		RQ11-L#28-30 Apr 5/6	
7-Apr	32	ENDO	LQ 32	PE 8		
10-Apr	33	REPRO	LQ 33			
12-Apr	34	REPRO	LQ 34		RQ12-L#31,32 Apr 12/13	
14-Apr		Exam 4				Topic Exam 4 ENDO-L#25-32

**PSL 432****Spring Semester 2023**

17-Apr	35	REPRO	LQ 35			
19-Apr	36	REPRO	LQ 36	PE 9	RQ13-L#33-35 Apr 19/20	
21-Apr	37	REPRO	LQ 37			
24-Apr	38	REPRO	LQ 38			
26-Apr	39	REPRO	LQ 39		RQ14-L#36-38 Apr 26/27	
28-Apr	40	REPRO	LQ 40	PE 10		
1-May		Exam 5				Topic Exam 5 REPRO-L#33-40