

MIMG 109AL – Spring 2026 General Lab Schedule v. 4-28-26

(As a research course, this schedule is dynamic and team-dependent)

NOTE 1: Within each team, students must adjust the schedule depending on the time it takes isolates to grow, or eDNA preparation and subsequent PCR steps to work. Troubleshooting and repeating experiments is part of research! CD & CI pairs must alternate each session so all students have a chance to practice multiple skills.

NOTE 2: If a CD team is done earlier, they should help the CI team and vice versa. Teams need to work together; students should not leave the lab early if there is still work to be done. Help your own team and other teams – points will be earned for good lab citizenry, and deducted for bad lab citizenry.

NOTE 3: Teams must submit samples for DNA sequencing no later than week 8. Notify your TA/instructor if your team is not on schedule since this setback will inhibit the team's ability to complete the project on time.

	All Students	Cultivation Dependent-Soil	Cultivation Independent, CD-Saliva
WEEK 1	- Practice streak-plate procedure; serial dilutions, spread plating (maracas technique), using micropipettes - Fire safety & Micropipetting quiz, BSC assessment - Soil Collection during week 1		
WEEK 2	- Perform 1st enrichment; - Learn plate camera operation Practicum #1 BSC & Streak Plate (Rubric Linked)	- Pick fast-growing isolates and streak plate (purification #1) Help CI team when completed	- Take pictures of plates from 1st enrichment - eDNA extraction (soil) Help CD team when completed
WEEK 3	- Microscope & Kohler tutorial - Gram Stain practice with controls	- Streak purify fast-growing isolates (purification #2); purification #3 for isolates that need this - Streak purify slow-growing isolates and streak plate (purification #1) Help CI team when completed	- Take camera images - Microscopic exam of controls - pH, water content for soil Help CD team when completed

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WEEK 4	- Collect pooled saliva samples (voluntary) Practicum #2 Kohler Illumination (Rubric Linked)  Lab Biochem...	- Streak purify slow-growing isolates and streak plate (purification #2) - Streak maintain pure fast-growing isolates - Perform biochemical tests - Functional assay #1 with select isolates based on hypothesis trial 1 Help CI team when completed	- Microscopic exam of isolates to determine purity - NPK for soil - Take camera images - Interpret biochemical tests - Genomic isolation & PCR-practice Help CD team when completed
WEEK 5	Practicum #3 Gram Stain	- Streak maintain all pure isolates - Perform other biochemical tests - Functional assay #1 with select isolates based on hypothesis trial 2 - Streak purify saliva samples (purification #1) Help CI team when completed	- Microscopic exam of isolates to determine purity - Take camera images - Interpret biochemical and functional tests - DNA extraction- saliva samples - Genomic DNA preparation of isolates (bacterial) Help CD team when completed
WEEK 6		- Streak maintain all pure isolates - Perform other biochemical tests - Streak purify saliva samples (purification #2 & #3 if needed) - Functional assay #1 with select isolates if previous assays were not reportable - Functional assay #2 with select isolates based on hypothesis trial 1 Help CI team when completed	- Take camera images - Genomic DNA preparation - PCR amplification of isolates (bacterial) - Interpret biochemical and functional tests - gram stain & visualize - saliva samples Help CD team when completed

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WEEK 7	Practice loading gels <u>Practicum #4 Pour & Load Gels (Rubric Linked)</u>	- Streak maintain all pure isolates - Perform other biochemical tests - Functional assay #2 with select isolates based on hypothesis trial 2 Help CI team when completed	- Genomic DNA preparation & PCR amplification of soil & saliva isolates, cont. - Take camera images - Interpret biochemical and functional tests Help CD team when completed
WEEK 8		- Streak maintain pure isolates - Perform other biochemical tests - Functional assay #2 with select isolates based on hypothesis if previous assays were not reportable Help CI team when completed	- Gel electrophoresis of 16S rDNA - Purify & quantify PCR products - Prepare & submit samples for 16S PCR sequencing - Microscopic exam & recording - Take camera images Help CD team when completed
WEEK 9 (1 period only)	- Prepare & submit samples for 16S colony PCR sequencing - Take final pictures of plates & cells/Catch up Experiments		
WEEK 10	- Cryogenic storage of isolates at -80°C - Take final pictures of plates & cells; Cleanup Team Presentations (last period of week 10)		