

Tuesdays: 2:00-4:30 Jones Annex 230

**Instructor:** Tom Kieft **Office:** Jones Annex 301 **Lab:** Jones Annex 302**Teaching Assistant:** Angelica Cave, email: [angelica.cave@student.nmt.edu](mailto:angelica.cave@student.nmt.edu), office: Jones Annex 207**Office Hours:** Mon & Wed. 10-12 (I'm often available at other times, too.)**Phone:** -5321; **Email:** [tkieft@nmt.edu](mailto:tkieft@nmt.edu); **Website:** [http://infohost.nmt.edu/~biology/people/faculty/t\\_kieft/](http://infohost.nmt.edu/~biology/people/faculty/t_kieft/)

**Grading:** Grading will be based **entirely** on lab reports. Reports are due one week after the data from a lab exercise are made available to the class. Attendance and participation in each lab session is required. Any student who has more than one unexcused absence will fail. Students who have one unexcused absence will receive a one letter grade penalty (10 percentage point deduction) in his/her semester grade. Any *bona fide* illness or family emergency must be documented through the Dean of Students.

Your lab reports will be evaluated as follows:

On time*	25%
Neatness	5%
<u>Title, Introduction, Methods</u>	20%
<u>Results:</u> data reduction and presentation	25%
<u>Discussion</u>	25%
Total	100%

\*Lab reports should be turned in on time. For each day a report is overdue, including weekends and holidays, one percentage point will be deducted from your overall grade for that report, up to a maximum of 25%. Final lab reports *will not* be accepted late.

Please consult "Instructions for Writing a Lab Report" for more information.

**Course materials on the web:** Some course materials will be made available via Canvas (<https://nmt.instructure.com>).

### Tentative Schedule

Date	Exercise
Jan. 16	No lab
Jan. 23	Microscopy
Jan. 30	<b>Plate count*</b>
Feb. 6	<b>ATP assay for biomass*</b>
Feb. 13	<b>Preparation of soil samples, soil enzyme activity: dehydrogenase assay*</b>
Feb. 20	<b>Soil: biodegradation – Mineralization of a <sup>14</sup>C-labeled substrate*</b>
Feb. 27	<b>Community Level Physiological Profiling (CLPP) using BIOLOG plates*</b> <b>Multi-week project, Report counts double*</b>
Mar. 6	Enrichment
Mar. 20	Isolation
Mar. 27	DNA extraction
Apr. 3	Gel electrophoresis, DNA extraction from gel
Apr. 10	Quantify DNA, prepare DNA for sequencing
Apr. 17	Field trip: Socorro Wastewater Treatment Plant
Apr. 24	<b>Coliforms: Membrane filtration method and most probable number method*</b>
May 1	No lab

\* Exercises for which you will write a lab report

### Counseling and Disability Services

**Reasonable Accommodations:** New Mexico Tech is committed to protecting the rights of individuals with disabilities. Qualified individuals who require reasonable accommodations are invited to make their needs known to the Office of Counseling and Disability Services (OCDS) as soon as possible. In addition, New Mexico Tech offers mental health and substance abuse counseling through the Office of Counseling and Disability Services. The confidential services are provided free of charge by licensed professionals. To schedule an appointment, please call 835-6619.

**Academic Honesty:** New Mexico Tech's Academic Honesty Policy can be found on page 79 of the NMT catalog ([http://www.nmt.edu/images/stories/registrar/2017-2018\\_Course\\_Catalog\\_FINAL.pdf](http://www.nmt.edu/images/stories/registrar/2017-2018_Course_Catalog_FINAL.pdf)) and starting on page 5 in

the NMT Student Handbook

([http://www.nmt.edu/images/stories/student\\_univ\\_relations/NMT%20Student%20Handbook%202016-17.pdf](http://www.nmt.edu/images/stories/student_univ_relations/NMT%20Student%20Handbook%202016-17.pdf)).

You are responsible for knowing, understanding, and following this policy.

Note that although you will often work in pairs or larger groups during the lab session, you will reduce your data, generate figures and tables, and write lab reports independently.