
Lectures on Informatics: An Introduction to Microbial Community Sequencing and Analysis

Past Lectures in This Series:

Date: January 17, 2017

Lecture #1: Introduction, Logistics, and Sequencing Technologies

This first lecture provided an introduction to the goals of this lecture series, what to expect, and the logistics of participating in the lectures. We then reviewed a brief history of sequencing technologies and applications in preparation for launching into the topic of microbial community sequencing and analysis.

How to view this lecture:

Available via mediasite and will remain available indefinitely: [Intro Microbiota Lecture](#)

Future Lectures:

Dates: January 24th through May 2nd 2017

Time: Tuesdays from 3:00pm to 4:30pm (No Lecture February 28th and March 28th)

Place: LSUHSC Human Development Center Room 133 (411 S Prieur St, New Orleans, LA)

Available Remotely: Lectures are available for remote viewing via [lecture series website](#)

Forum: Please Request to join the [forum](#) to receive updates and info on the lecture series

This lecture series will provide an introduction to the sequencing and analysis of microbial communities. We will introduce various sequencing approaches to studying the microbiota in humans, model organisms, and environmental samples with an emphasis on 16S rDNA sequencing. We will cover common sequencing file formats and approaches to performing primary and secondary analysis on them with a focus on the Illumina MiSeq platform. A research data set will be used to provide hands on exercises applying the techniques covered in lectures. We will also discuss approaches to broader assessments of the metagenomics of microbial communities.

Prerequisites: These lectures will introduce concepts from a fairly basic level but some facility with using computers and knowledge of basic biology and familiarity with sequencing technology will be extremely helpful. **If you would like a primer on these areas then we recommend working through the initial lecture series entitled Lectures on Informatics: An Introduction to Computers and Informatics in the Health Sciences. This prior lecture series can be accessed at the following URL [here](#).**

Evaluation: This lecture series will be participation driven and there will be a variety of high level exercises introduced throughout the series along with online quizzes. The exercises will utilize a research data set that you will be provided access to in order to perform the analyses that we cover during the lectures. You are highly encouraged to participate in the exercises and to pursue these topics outside of the official meeting time. If you are signed up to receive credit for this lecture series from your institution, then you will be required to complete the exercises and quizzes for evaluation of your understanding of the material presented.

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Microbial Genomics Resource Group Page | <http://metagenomics.lsuhscc.edu/mgrg>

Faculty Page | <http://metagenomics.lsuhscc.edu/taylor.html>