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

Dates: January 17th 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)
Remote: Lectures are available for remote viewing via lecture series website
Website: http://metagenomics.lsuhsc.edu/lectures/intromicrobiota
Forum: https://groups.google.com/forum/#!forum/lecturesonmicrobiota
(Request to join the forum to receive updates and info on the lecture series)

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Content: 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.

Prereqs: 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 I recommend working through my 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:
http://metagenomics.lsuhsc.edu/lectures/introinformatics

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.