# Genotyping-by-sequencing workshop May 12-28, 2015 Tuesday-Thursday 10am-12pm, ALS 3005

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| Office Hours | Tues-Thurs 2-3 pm |  |  |

### Description:

Genotyping-by-sequencing (GBS) is a powerful technology that is being applied to a broad range of research projects in molecular genetics. This three-week workshop intends to explore all aspects of GBS, from applications to experimental design considerations, data formats, and data processing. We’ll use several popular software packages to manipulate, analyze and visualize GBS data. In class discussions, GBS veterans will have an opportunity to share their experiences with GBS newbies. We’ll also talk about GBS services provided by the OSU Center for Genome Research and Biocomputing.

### Goals:

Understand how GBS works

Gain experience with bioinformatic processing of GBS data

Learn what tools and services are available at the CGRB

### Requirements:

CGRB account   
Basic command line familiarity   
R experience helpful, but not required

### Course Schedule:

| Date | Topic |  |
| --- | --- | --- |
| 5/12/15 | Introduction to GBS: overview of applications and lab methods |  |
| 5/14/15 | Data processing with TASSEL pipeline |  |
| 5/19/15 | Working with the TASSEL GUI |  |
| 5/21/15 | Data processing with the Stacks pipeline |  |
| 5/26/15 | Genome-wide association analyses (GWAS) Yuan Jiang, OSU Department of Statistics |  |
| 5/28/15 | More GBS data processing pipelines |  |

Access to course documents  
Research article pdfs, Powerpoint presentations, tutorials, and other course-related documents will be posted in a Google Drive space. Example data and scripts will be available in a designated space on the CGRB biocomputing infrastructure (specific location to be announced in class).

Attendance policy  
Attendance is mandatory for students taking the course for credit. A sign-in sheet will be provided at each class session. Students must sign in at each class session to receive course credit.

Statement Regarding Students With Disabilities:  
Accommodations are collaborative efforts between students, faculty and Disability Access Services (DAS). Students with accommodations approved through DAS are responsible for contacting the faculty member in charge of the course prior to or during the first week of the term to discuss accommodations. Students who believe they are eligible for accommodations but who have not yet obtained approval through DAS should contact DAS immediately at 737-4098. DAS website: <http://ds.oregonstate.edu>