

# Module 4: Introduction

## Module 4



## Overview

In this module, you will be learning to compare results from two differential gene expression analyses. You will be assigned one of the 9 trimming data sets to run through the differential expression pipeline and compare the results from the untrimmed data you ran in the last module. We will use techniques such as correlation and overlap to determine how results of two differential expression analyses are similar and different.

## Learning Objectives

By the end of this module, you'll be able to:

### 4.1 Biology/Stats (2 hours)

1. Conduct a pairwise correlation analysis of differential expression results
2. Generate a Venn diagram of pairwise overlap between two differential expression analyses
3. Describe what a p-value is and what multiple hypothesis testing is.

### 4.2 Coding (2 hours)

1. Visualize overlap between two differentially expressed gene lists

#### **4.3 Research/Professional development (30 min)**

1. Identify software versions, modes, and parameters used for analysis in the methods section of a publication