Introduction to R Programming (Fall 2017)

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Workshop Details

Date: November 3, 2017, 9 am – 12:30pm
Instructor: Jenny Drnevich (HPCBio)
Workshop Assistant: Meng-Chun Tseng
Location: IGB 607 (basement of gatehouse)

WORKSHOP MATERIALS

- Introduction to R
  - R installation guide
  - R swirl pre-homework
  - Linux vs. R comparison
  - Continued use of R and Bioconductor guide
  - Intro to R Slides
  - Data: introR_03nov17.zip

- Video recording: HERE

Additional Resources:

Why learn R and Bioconductor:

- Nature Toolbox: Adventures with R
- Why you should learn R first for data science
- Orchestrating high-throughput genomic analysis with Bioconductor

How to learn R and Bioconductor:

- The R manuals
- swirl interactive lessons (see R homework above for guide on how to get started)
- Bioconductor’s Course Materials
- UIUC Intro to R tutorial
- Jared Knowles’ R Bootcamp
- IDRE, UCLA: Resources to help you learn and use R
- Software Carpentry’s Programming with R
- John Hopkins University’s MOOCs on Coursera.org:
• The Data Scientist's Toolbox
• R programming
• Bioconductor for Genomic Data Science

• Code School: Try R (warning: free but must register; they send a lot of spam e-mails)
• Thomas Girke's R & Bioconductor Manual
• Learning Statistics with R
• R reference card (good to print out)
• Writing an R package from scratch (intermediate R users)
• RStudio's cheatsheets and online learning resources
• F1000 Research's Bioconductor Channel

How to learn the tidyverse:

• Tidyverse homepage
• R for Data Science
• Switching from base R to tidyverse
• What is the tidyverse?

R blogs:

• R-bloggers
• hipsteR
• RStudio blog
• R/Bioconductor blog by Sean Davis
• Twitter: One R Tip a Day