

# Introduction to R

Harvard Chan Bioinformatics Core

<https://tinyurl.com/hbc-r-online>

Sponsored by DF/HCC and HMS Foundry

# Learning Objectives



- ✓ Comfortably use RStudio (a graphical interface for R)
- ✓ Fluently interact with R using RStudio
- ✓ Become familiar with R syntax
- ✓ Understand data structures in R
- ✓ Inspect and manipulate data structures
- ✓ Install packages and use functions in R
- ✓ Visualize data using *ggplot2*
- ✓ Utilize pipes, tibbles and functions from the Tidyverse package suite

# Exit survey

<https://tinyurl.com/r-workshop-hbc>

# Interested in additional training?

<https://hbctraining.github.io/Training-modules/>

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## Short workshops: Current Topics in Bioinformatics

These workshops are free and open to all researchers at Harvard University and affiliated institutions.

- **Workshops** on bioinformatics methods & related skills.
- Once a month for 3 hours
- Hands-on workshops - be prepared with your MAC or Windows computer
- **Free and open to everyone at Harvard University and its affiliates**
- Will meet the **first Wednesday of the month** (with one exception) **online via Zoom**
- **Sign up at the links below to receive the workshop Zoom link**

# Interested in additional training?

<https://hbctraining.github.io/Training-modules/>

Current Topics in Bioinformatics workshops 2023 Schedule (1pm - 4pm):

Topic and Link(s) to lessons	Prerequisites	Date	Registration
<a href="#">Git/Github</a>	<a href="#">Introduction to Shell</a>	4/19/2023	<a href="#">Sign up!</a>
<a href="#">Basics of Python</a>	None	6/21/2023	<a href="#">Sign up!</a>
<a href="#">R Basics</a>	None	7/19/2023	Coming soon
<a href="#">R Intermediate</a>	Beginner R or <a href="#">Online R course - Harvard Catalyst</a>	8/16/2023	Coming soon
<a href="#">Publication Perfect: Part I</a>	Beginner R or <a href="#">Completion of the Intro to R online resource</a>	9/20/2023	Coming soon
<a href="#">Publication Perfect: Part II</a>	<a href="#">Publication Perfect: Part I</a>	10/18/2023	Coming soon
<a href="#">Rmarkdown</a>	Beginner R or <a href="#">Online R course - Harvard Catalyst</a>	11/15/2023	Coming soon

# Data Management Short Workshops


Date	Time	Event	Location
May 10	10am	<b>Where Should I Put My Data? Understanding Data Storage at HMS</b>	TMEC 328
May 17	12pm	<b>DMPTool: One-Stop-Shop for Data Management Plans</b>	Zoom (libcal.countway.harvard.edu...)
May 24	10am	<b>Intro to Python</b>	TMEC 328
May 31	12pm	<b>Closing Out Your Research: Data Transfer</b>	Zoom (libcal.countway.harvard.edu...)

<https://datamanagement.hms.harvard.edu/about/news-events/rdmwg-calendar>



# Harvard Catalyst Online Resource

<https://projects.iq.harvard.edu/hcatrresource>


 HARVARD UNIVERSITY

HARVARD.EDU

## Harvard Catalyst Introduction to R:

*An online, hands-on training resource for learning the basics of R*

[Contact](#)

 HARVARD  
CATALYST

Harvard Clinical & Translational Science Center

HOME Lessons Faculty Supplemental Resources


### Welcome to Introduction to R

This **online, hands-on learning resource** will introduce you to using R and RStudio. R is a simple programming environment that enables the effective handling of data, while providing excellent graphical support. RStudio is a tool that provides a user-friendly environment for working with R. This resource is intended to provide both basic R programming knowledge and information on utilizing R to increase efficiency in data analysis.

This comprehensive online learning resource was created in collaboration between [Harvard Catalyst](#) and the [Harvard Chan Bioinformatics Core](#). It includes a series of videos explaining fundamental concepts in R and demonstrates the application through live coding. It is geared toward those interested in learning the basics of R for reproducible data wrangling and visualizations (ggplot2), and/or performing data analyses that require a basic knowledge of R.

Resource lessons address the following:

- **R syntax:** Understanding the different 'parts of speech' in R, and introducing variables and functions, demonstrating how functions work, and modifying arguments for specific use cases.
- **Data structures in R:** Explaining the classes of data structures and the types of data used by R.
- **Data inspection and wrangling:** Reading in data from files, and using indices and various functions to subset and create datasets (including the tidyverse suite of packages).
- **Visualizing data:** Visualizing data using plotting functions from the external package ggplot2.
- **Exporting data and graphics:** Generating new data tables and plots for use outside of the R



# Get (stay) in touch with us!

*Sign up for our mailing list:*

<https://tinyurl.com/hbc-training-mailing-list>

*Training email:* [hbctraining@hsph.harvard.edu](mailto:hbctraining@hsph.harvard.edu)

*Consulting email:* [bioinformatics@hsph.harvard.edu](mailto:bioinformatics@hsph.harvard.edu)

**Twitter:** [@bioinfocore](https://twitter.com/bioinfocore)