

GIS CODON+

Genomic data science courses



The Genome Institute of Singapore (GIS) is the national flagship initiative for genomic sciences started in 2000 by A*STAR. GIS CODON+ courses will provide interactive hands-on training in genomics data science with a focus on solving real world challenges.

We are currently offering four courses. Each course begins with a 3-day intensive bootcamp using a problem-based approach, followed by a month long capstone project. Our projects use paired programming techniques (industry best practice) and our students are supported throughout by weekly mentoring sessions.

Calendar

	Programming essentials for genomics data science	Genomics data science with bulk RNA-seq	Genomics data science with single-cell RNA-seq	Statistical modelling for genomics data science
Nov'23	Bootcamp: 27, 29 Nov, 1 Dec	Bootcamp: 4, 6, 8 Dec		
Dec '23		Capstone final: 8 Jan		
Jan '23			Bootcamp: 15, 17, 19 Jan	
Feb '23			Capstone final: 15 Feb	Bootcamp: 26, 28 Feb, 1 Mar
Mar '23				Capstone final: 1 Apr

Registration



REGISTER YOUR INTEREST:
https://bit.ly/GIS_Codon_Courses



For further inquiries:
training@gis.a-star.edu.sg

COURSE DETAILS

Genomics data science with bulk RNA-seq

- Discover biologically meaningful genes and pathways.
- Design good experimental studies.
- Key topics include:
quality control, differential gene expression, pathway/gene set enrichment, cell deconvolution

Genomics data science with single-cell RNA-seq

- Quality control of large datasets
- Perform differential gene expression within cell types.
- Key topics include:
cell clustering, cell type annotation, trajectory analysis

Genomic data sciences with bulk RNA-seq course or equivalent knowledge is highly recommended.

Statistical modelling for genomics data science

- Uncover hidden relationships in genomics data.
- Automate routine tasks for research analytics.
- Key topics include:
unsupervised machine learning, linear and logistic regression, model evaluation, advanced data types

Programming essentials for genomics data science

- Learn how to process and check for data quality
- Read in, check, prepare and explore data
- Generate high quality publication-ready visuals

This is the prerequisite course if you do not have a good working knowledge of R programming.

Instructors

GIS faculty including: *Dr. Adaikalavan Ramasamy, Dr. Gökçe Oğuz, Dr. Jonathan Göke, Dr. Tim Stuart and Dr. Shyam Prabhakar.*

Tuition Fees

	A*STAR Participants	Non-A*STAR Participants
One Course	\$2,000	\$2,500
Two Courses	\$3,500	\$4,500
Three Courses	\$5,000	\$6,500

* Add "Programming essentials for genomics data sciences" for \$750 if you do not meet the prerequisites for other workshops