

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 three courses. Each course begins with a 3-day intensive bootcamp using a problem-based approach followed by a month long capstone project using industry standard practices (e.g. paired programming) with 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 '22	Bootcamp: 7-9 Nov	Bootcamp: 14-16 Nov		
Dec '22		Capstone final: 16 Dec		
Jan '23			Bootcamp: 9-11 Jan	
Feb '23			Capstone final: 17 Feb	Bootcamp: 20-22 Feb
Mar '23				Capstone final: 24 Mar

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 and Dr. Shyam Prabhakar.*

Pricing

	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