HackBio Internship

Internship Process Manual

🛑The following set of actions are instructions that will help the internship participants to navigate the internship. In this internship, you will work in teams, complete and submit your tasks as a team. Final prizes will be awarded to both individuals and teams (more information on final prizes will be shared later during the course of the internship).

Workspaces

Hackbio LMS slack GitHub Drive zoom

- **HackBio: https://thehackbio.com**
- **Github: https://github.com/**
- **Zoom: https://zoom.us/**
- **Google Drive: https://drive.google.com/drive/my-drive**

Social Media Guide:

We encourage you to share your progress and experience on social media using the following tags and handles.

- **Linkedin**: @HackBio
- **Twitter**: @thehackbio
- **Hashtag**: #HackBioInternship #Bioinformatics

Timeline:

Stage 1 (14 days) **March 10 - 23**	**Stage 2** (14 days) **March 24 - April 6**	**Stage 3** (14 Days) **April 7 - April 20**	**Stage 4** (14 Days) **April 21 - May 4**	

Key Summaries:

- There are 4 stages in the internship, Stages 1, 2, 3 & 4.
- An elimination process takes place after every week.
- Elimination is based on your ability to contribute and participate significantly to your teams' work before deadlines.
- Weekly meeting with organizers/mentor team to solve problems and tasks. Date and time for the meetings are on the calendar (see page …).
- Resourcefulness and teamwork will be greatly rewarded
- The Recommended Learning Resource: HackBio's genomics course.
- We will also suggest some youtube videos for you to use along the way if you are unable to purchase the course.

How to Submit tasks

- To be able to submit your solutions, Create a GitHub account or Google [Drive] account
- Create a single PDF file that contains your codes and plots as a single PDF or R Markdown File
- In your submission, please include the **names and slack handles** of everyone that participated and contributed **actively** in the successful completion of the task.
- In addition, please list exactly what each person did/contributed to the project. This is very important for us to track progress.
- Share with your manager to review before you upload.
- Upload the file to a google drive or GitHub page.
- Make sure it is publicly accessible. (Test the link on another browser/device to be sure it is accessible)
- Submit the link using the “Submit Project” button in the LMS

Selecting Team Leads

- We STRONGLY encourage female leadership in science, and we believe it can start from here.
- If there is only one female in the group; she automatically becomes the team lead; if there are more than one, then it can be contested for between all males and females.
- Also select an assistant team lead. If you have a female team lead, then you should have a male team lead and vice versa.
- In the case of a contested team-leader position, contestants should propose a mini-manifesto on why they think they are fit to lead the team to success

Manifesto (Updates and Fixes)

- 5 stages is now reduced to 4 stages ✅
- 5 weeks is now increased to 8 weeks. Meaning, 2 weeks for each stage. 😋
- Fortnight meeting with mentors to explain task and assign appropriate learning resources. ⚛️
- We retain elimination and deadlines at each round to maintain dedication. ⏳
- People who are resourceful/helpful also gain extra points for their efforts. 💯
- Cool gifts by the end of the internship to amazing people and teams. 🎁

Stage 1: Welcome and programming basics [Easing In]

This stage is to help participants ease into the program, integrate with their team and people, take their time to learn and build their confidence in bioinformatics. In this phase, you will learn how to program in BASh. Here are the instructions for this stage

- Attend the Onboarding call
- Join the slack workspace
- Edit your profile 😀(optional)
    - Edit your display name to a single alphanumeric word (no spaces.
    - Set your status to "**Stage 1**1️⃣"
    - Calm down and wait for instructions

Stage 2: Mastering the Basics

Here, you will build a fully functional NGS data analysis pipeline that can handle any given NGS dataset and spit out the mutations in the dataset. This is the foundation of genomics. It has a little bit of software and data engineering components but we provide enough resources to help you solve them. You will write everything in BASh. You will use this pipeline at later stages in the internship, so make sure it works well on any dataset or device/system.

Everything in this stage will be fully tested for speed, accuracy and reproducibility. We prioritize more on reproducibility and accuracy over speed. Also, at the end of this stage, someone in your team should be selected randomly to present your pipeline and how it works.

Stage 3: First Project

This is the first CV worthy project you will do. We should also inform you that you will have to split your team into 2; the technical people that will work on the coding side of the projects; and the communications part that will work on writing a technical report as well as a short video describing what you did in simple language.

Note, there is no reshuffling of teams here, only transfer of people if your team has lost too many people.

Stage 4: Second Project

This is the last stage. Congratulations!!! This is another CV worthy project that will help you utilize your genomic skills to solve important diseases. We will provide datasets for 1 cancer subtype, plant disease, neurodegenerative disorder and lifestyle related disorder. At this stage, if you also have a project idea, it is also welcome and you can convince your teammates to solve it together. Nevertheless, we also provide project ideas in the LMS. Just pick one and solve it.

Also, you should have a technical and a communications team just like the last stage.

Event Calendar

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
March 10 Onboarding call Team Formation Setting Up Stage1 Begins	**11** Meet your manager Mentor Meeting Setting Up Cont'd	**12** Rollout of task 1 Work Starts	**13** Work Continues	**14** Technical Help and support	**15** Kudos RoundUp One	**16** Mentor Meeting Technical
17 Roll out of task 2 Work continues	**18**	**19**	**20** Early submission begins	**21** Submissions Continues	**22** Submission Close Feedback day	**23** Promotion Day Cooling off Event
24 Stage 2 begins Team Re-formation Mentor Meeting	**25** Meet your manager Rollout of tasks Work starts	**26** Work Continues	**27** Technical Help and support Work Continues	**28** Work Continues	**29** Kudos RoundUp Two	**30** Mentor Meeting Preparation for Battle
31 Work Continues	**April 1** Preparation for Battle	**2** Early Submission begins	**3** Submission continues	**4** Late Submission and close of submission	**5** Who is Who Battle	**6** Promotion Day Cooling off Event

7 Stage 3 Begins Rollout of Tasks Mentor Meeting	**8** Leadership re-evaluation Work Begins	**9** Work Continues Split team task into 2	**10** Feedback day Start preparation for video release	**11** Technical Help and support	**12** Kudos Round Up 3	**13** Mentor Meeting Evaluation
14 Work continues	**15** Women in Science	**16** Early Submission begins	**17** Release video	**18** Submission close	**19** Collecting Video stats on SM	**20** Promotion Day Cooling off Event
21 Stage 4 Begins Final Projects Mentor Meeting	**22** Leadership re-evaluation Work Begin	**23** Work Continues Split team task into 2	**24**	**25**	**26** Early release of graphical abstract Kudos round up 4	**27** Mentor Meeting Preparing for final presentation
28 Preparing for final presentation Pitch Release	**29** Voting begins	**30**	**May 1**	**2**	**3** Submission of Manuscript Draft 1	**4** Final Presentation Awards day!