

Computational Biology

Lab 1 - Cell Cycle

Jo Grundy

ECS Southampton

2nd February 2024

Lab 1 - Introduction

Labs: 35% of your final mark.

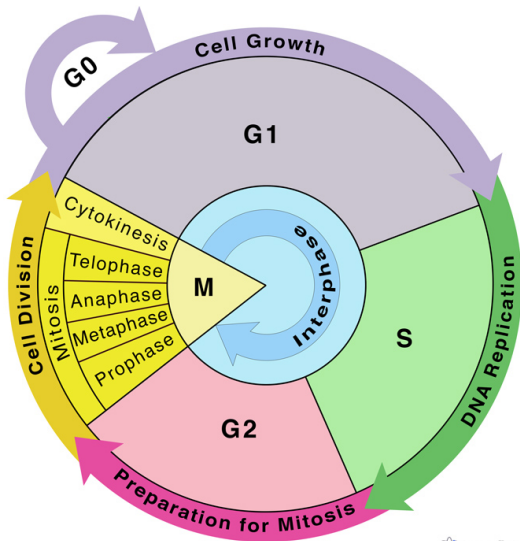
- ▶ The first task is worth 5%
- ▶ The other three tasks are worth 10% each
- ▶ Tasks set on MOODLE
- ▶ Marked in person in the lab by me or a demonstrator
- ▶ If you can't make it in, you *may* submit a report instead.

General points:

- ▶ All graphs and plots need to be fully labelled
- ▶ All task points need to be addressed
- ▶ `jupyter` notebooks make this easy

Lab 1 - Introduction

The Cell Cycle



Lab 1 - Introduction

Data Exploration - Human Cell Cycle

- ▶ Cell Cycle Data
- ▶ mRNA and raw protein measurements
- ▶ mRNA is cheap to measure
- ▶ Protein levels are not

Can you infer protein concentration from mRNA concentration?

Useful resources:

- ▶ Lab 0 - get yourself started with a Python Environment
- ▶ Data
- ▶ Videos

Lab 1 - Introduction

Python packages

- ▶ pandas
- ▶ matplotlib
- ▶ numpy

Python Environments

- ▶ see Lab 0
- ▶ or `ecs.gg/kb` and search for python environments

Lab 1 - Introduction

If you need help...?

Lab 1 - Introduction

If you need help...?

ASK!