

The oGEM Manual

A 2017 Interprovincial Document for
the Years to Come

Edited by the McMaster iGEM, UGuelph iGEM, and University of Toronto iGEM teams, with
Contributions from _____

About the Manual (or, Why Does This Exist?):

On July 17th, 2017, our annual oGEM meeting took place. Bringing together all of the post-secondary iGEM teams, the day allowed for discussion of our projects, our future, our strengths, and our weaknesses. While they were not at the center of the talk, surely but slowly common worries were brought forth, none of them relating to our projects at all but to our own selves: how do we even begin an iGEM team? How do we manage one that exists? How do we continue one that graduating students leave to us?

Throughout the years, this running theme of looking at our iGEM teams not through the lens of our projects and work but through the very essence of them, which is to say *the people who make up iGEM in the first place*, is something that has oft been pushed back and neglected. At the meeting that day, we realized that surprisingly, none of us were in the same stage of development in our growth as iGEM teams. Two teams just started that year; others had come back after some years of hiatus or had only been established for a number of years. Then, there were the teams that had been established as the forefront of oGEM, having been constants for years in this field. Yet, we all had our concerns about how to manage, grow, and develop our teams to be better. Despite our differences in experiences and years, or perhaps because of that, we came to realize that we could help each other build better, more solid foundations by exchanging the knowledge we had accumulated over the years. Thus, this manual came to be, out of a desire to be able to share and pass down that knowledge to all of us, and to you.

This manual will always remain open to edits, revisions, suggestions, comments, and questions. It is in our hopes that this manual grows as our teams will, and that what we have learned through this amazing journey in camaraderie and synthetic biology will always be available for those who need or want it.

Thank you, and good luck with your endeavours in iGEM. You'll be amazing.

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This Manual is divided into two sections: The Meta, and The Usual.

The Meta will serve to encompass questions related not directly to the projects each subteam is working on; it will see to concerns we have about our teams and the individuals that make them.

The Usual will examine problems and questions we may encounter while doing our projects. This can range from Wiki topics and successful community workshops to attaining medal requirements and PI-related bafflement.

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PLEASE READ BEFORE EDITING:

- Please demark all text you have written as part of your iGEM team by changing the colour of your writing to the colour assigned in the Legend of Team Colours
- If you want to make edits to the *structure/format* or the headers (not adding headers, but removing or editing them), please **comment** on the header instead of directly editing it
- If your team wants to claim a specific subject or header for yourselves/become the main editor for it, please leave a comment on it as well!

Legend of Team Colours:

- Guelph
- Toronto
- McMaster

Section 1: The Meta

At their cores: what makes up an iGEM team, and how it can grow.

Starting Your Team

[Some vague description about the joys and wonders this can entail!] [Firstly, you have to look at how other teams have done it, what kind of subteams they have, etc. etc.]

[LONG WORDS AND PARAGRAPHS HERE - the most important things!

[NOTES: Format can be general advice (lots of words), then TL;DR in the form of a FAQ, then tips and tricks? Play around with this.]

What Do We Want Our Team to Look Like?

[BLAH - Assuming you didn't just up and start an iGEM club with only your lonesome self (but if you did, kudos to your pizzaz!), then you'll already have designated roles for yourselves...]

How Do We Register Our Team to iGEM?

[Blah]

How Many People Should We Aim to Recruit?

[Blah]

How Do We Hire the Right People?

Managing Your Current Team

[Some vague description]

Setting Team Expectations and Roles

[Blah blah senpai notice me]

Administration

[And all the duties that entails!]

Team Structures, Positions, and [Hierarchies]

Because execs are there for a reason

Training New Members

[Something]

You Said How Much Paperwork?

A lot. A lot of paperwork.

Communicating and Collaborating with Your Team

The toughest part of this endeavour.

How Should Execs Keep in Touch?

Meetings

How Should Each Team as a Whole Communicate?

Slack slack slack

How Should Each Subteam Communicate?

Depends on the long-distance relationships you've got going on over summer

How Can All the Different Subteams Effectively and Efficiently Communicate with Each Other?

It's honestly quite important that this be done well, for several reasons.

How Often Should We Communicate?

\o/

Developing Your Team

!!!

Mentorship

Because they're the best

Transferring Knowledge

Oh my.

Team Bonding

\o/

SHOTS

Member Development

<3

Growing Your Team

Grab the first years before they're gone. (or less impressionable)

Marketing on Campus to Other Students

When to market? Where? How?

Keeping Your Social Media Updated and Shareable

Gotta Tag 'Em All!

Fundraisers and Awareness Campaigns

Buy our baked goods to support iGEM!

Troubleshooting Your Team

We've all had to do this.

How to Prevent Setbacks as Much as Possible

Prevention is the best cure.

How to Identify Minor Setbacks

□

How to Identify Major Setbacks

:C

How to Handle Deadlines, Individually

Procrastination, everyone.

How to Handle Deadlines, as a Team

Collaboration, Google Docs edits, and furious back and forths on Slack checking to see if someone sent that email already.

How to Learn from Our Mistakes

This.

Tips, Tricks, and Troubles for the Meta:

Things we've all shared.

- The earlier your start recruitment, the better. This cannot be said enough.
- Have a balance between lower years and upper years. This makes both mentorship and transitioning much more easy (although it's up to personal preference).
- Etc.

Section 2: The Usual

Why we even joined, or, the Joys of SynBio and iGEM

The Basics

[Some vague description]

What Are the Roles of Each Subteam?

Figure this out above all else. Trust us - it makes life easier in the long term,

What Do Our Timelines and Deadlines Look Like?

If you haven't asked yourself this yet and started planning around that, get to that ASAP.

The Project

Or, what your PI will allow you to do.

How Do We Decide on a Project?

[Hint: Ask your PI. Otherwise, look at the different iGEM categories, etc.]

How Do We Even Recruit a PI?

Here come the emails and interviews.

How Do We Get Lab Space?

PIs! But then again, not all PIs have labs, maybe.

Where Can We Find People to Teach Us How to Do Assays and Other Science?

Grad students are great.

How Can We Get Our PI to Believe in Us?

Maybe they never will. But hey, they're there for you anyway.

The Wet Wet Wet Wet Wet Lab

PCRs - are they godly, or just the bane of your failed-controls lives?

What are standard assays that we should use for _____?

???????

The Mysterious Dry Lab

Do you even ever see the dry lab members? Or do they disappear, into the night, with nary a soul in sight? Ah, wait, that's just my vision going blind after spending hours 3D modelling.

What Are the Most Important or Prominent Languages I Should Learn?

Python, HTML, CSS, JavaScript, React, R, Bosh

What Are Some Programs That Can Help for X?

Sorry Dry Lab folks I genuinely only have a smidgen of a clue what you do but I appreciate you all regardless.

Practices on Humans (or People, Policies, and Practices)

Eyyyyyyyyyy

Understanding Synthetic Biology As Seen by the Public Eye

This is important.

How Do We Explain SynBio to the Laymen?

Argh.

Understanding the Science Behind SynBio Policies and Guidelines

Yup.

Emailing Stakeholders and Interested Parties

The worst. THE WORST.

Meeting with Stakeholders and Interested Parties

To record and transcribe or to not spend all that time for nothing?

How to Reach Out to the Local Community

Where to start? Probably high schools, if not your own campus and its affiliated institutions.

Organizing Workshops, Awareness Campaigns, and Fundraisers

Ew.

Fundings, Sponsors, and Money Issues

How Do We Apply for/Get Funding and/or Grants?

Money, money, money, always sunny, in a rich man's world!

Who Should We Look for as Sponsors/Partners?

(Alumni connections tbh)

Who Will Give Us Those Sweet Free Samples?

<3

How Do We Capitalize on Resources?

\$\$\$

The Wiki

Think you're so hot? Wait until the Wiki Freeze.

What Is So Important About This Wiki, Anyway?

Oh dear, you did not just ask that.

What Is the Wiki Freeze?

D:

Why Are the Other Teams' Wikis So Pretty?

Because.

The Competition

Or, the end goal.

Medal Requirements

Reaching for that gold.

Collaborations

Hence, this manual.

The Jamboree

AirBnB, party buses, clam chowder, and more.

Tips, Tricks, and Troubles for the Usual:

Frustrations endured just for this:

- THE FIRST STEP ONCE YOU HAVE A TEAM IS TO FIND A PI. NOTHING ELSE MATTERS UNTIL YOU HAVE A PI probably.
- Money is important. This cannot be stressed enough. *Money is **important**.*
- People don't respond to emails quickly, or at all. Be persistent. Follow-up every single time (unless they're nice and get back to you!)

Afterwords:

[Something something]

Thank you to oGEM, Ontario Genomics, etc.

Contact us at any time at igemmcmaster@gmail.com.