

## Train Project Management Skills with Thesis Research

- GAPS (Graduates for Advancing Professional Skills) Program

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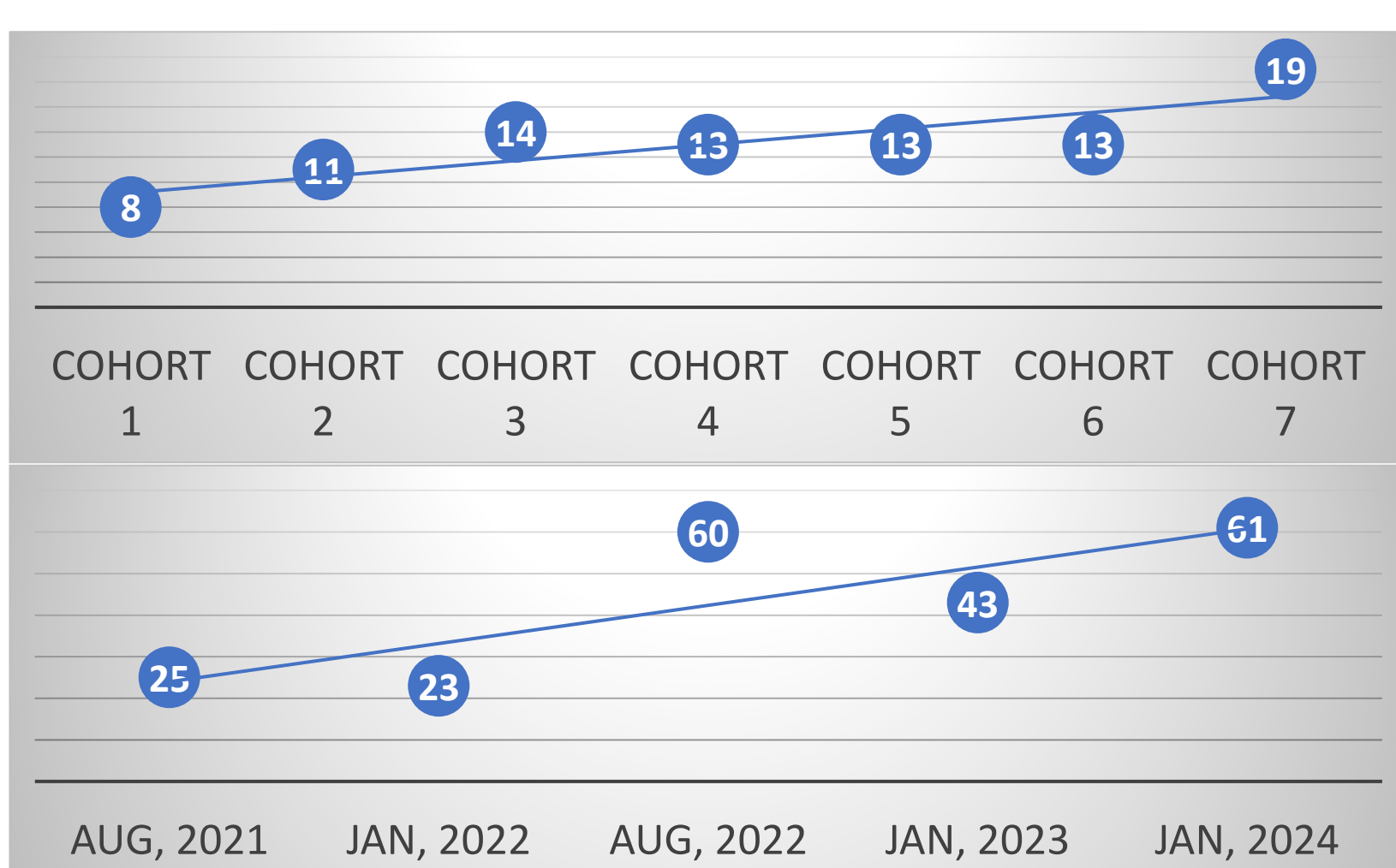
### Overview

- **GAPS Courses** are centered on training STEM graduate students to learn and implement *project management* skills to their thesis research, including crafting a project charter, effective time management, and developing a communication strategy.
- **GAPS Workshops** offer semester-basis workshops to engage students with successful professionals to gain career advice, which also act as recruiting events.

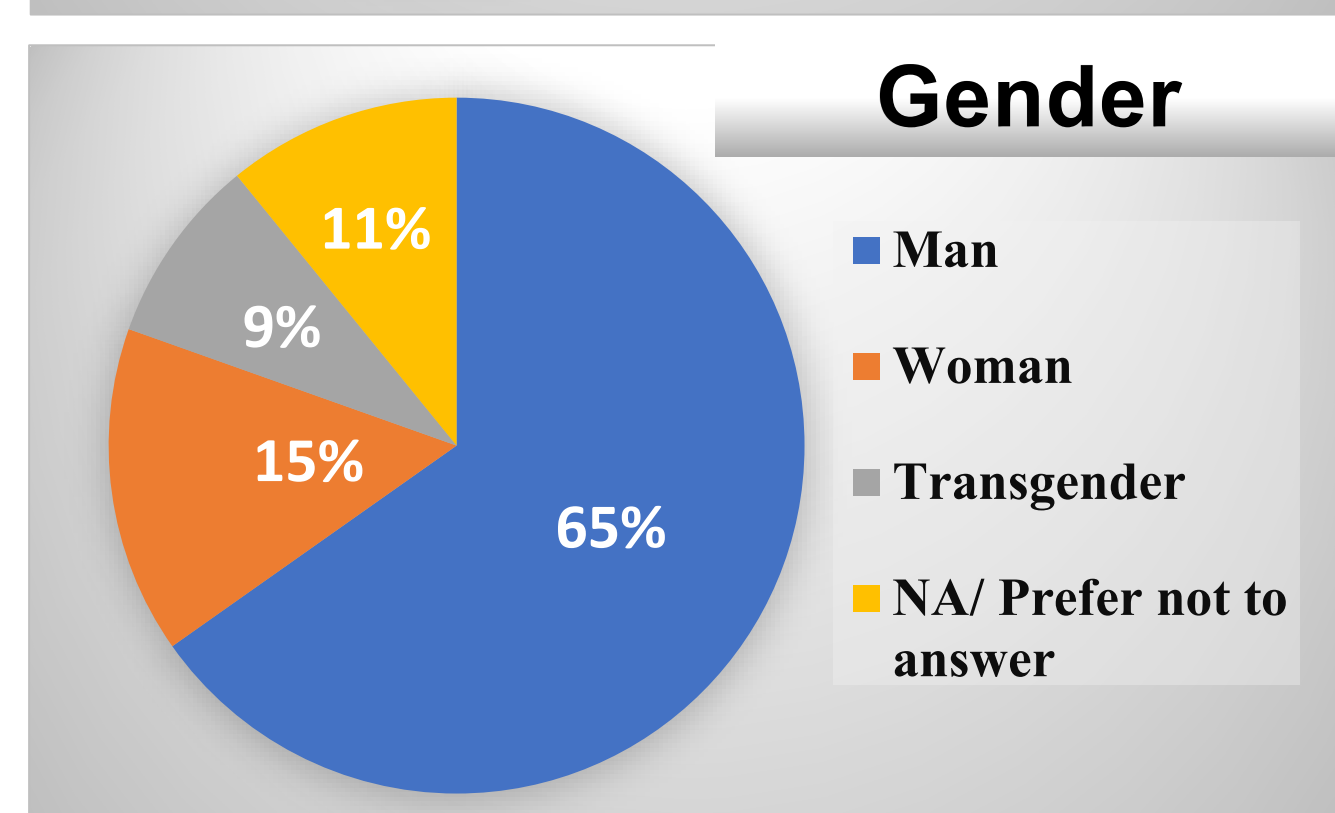
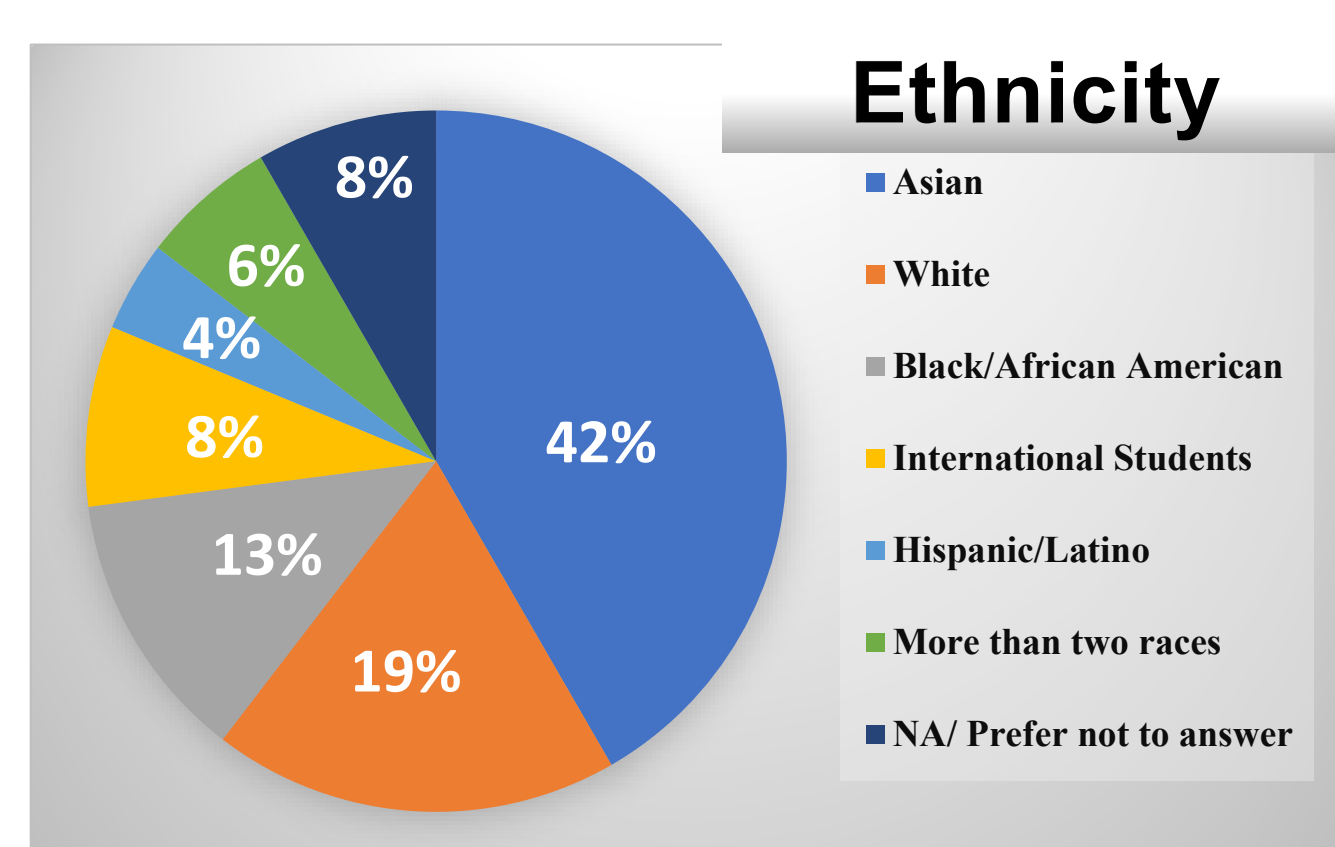
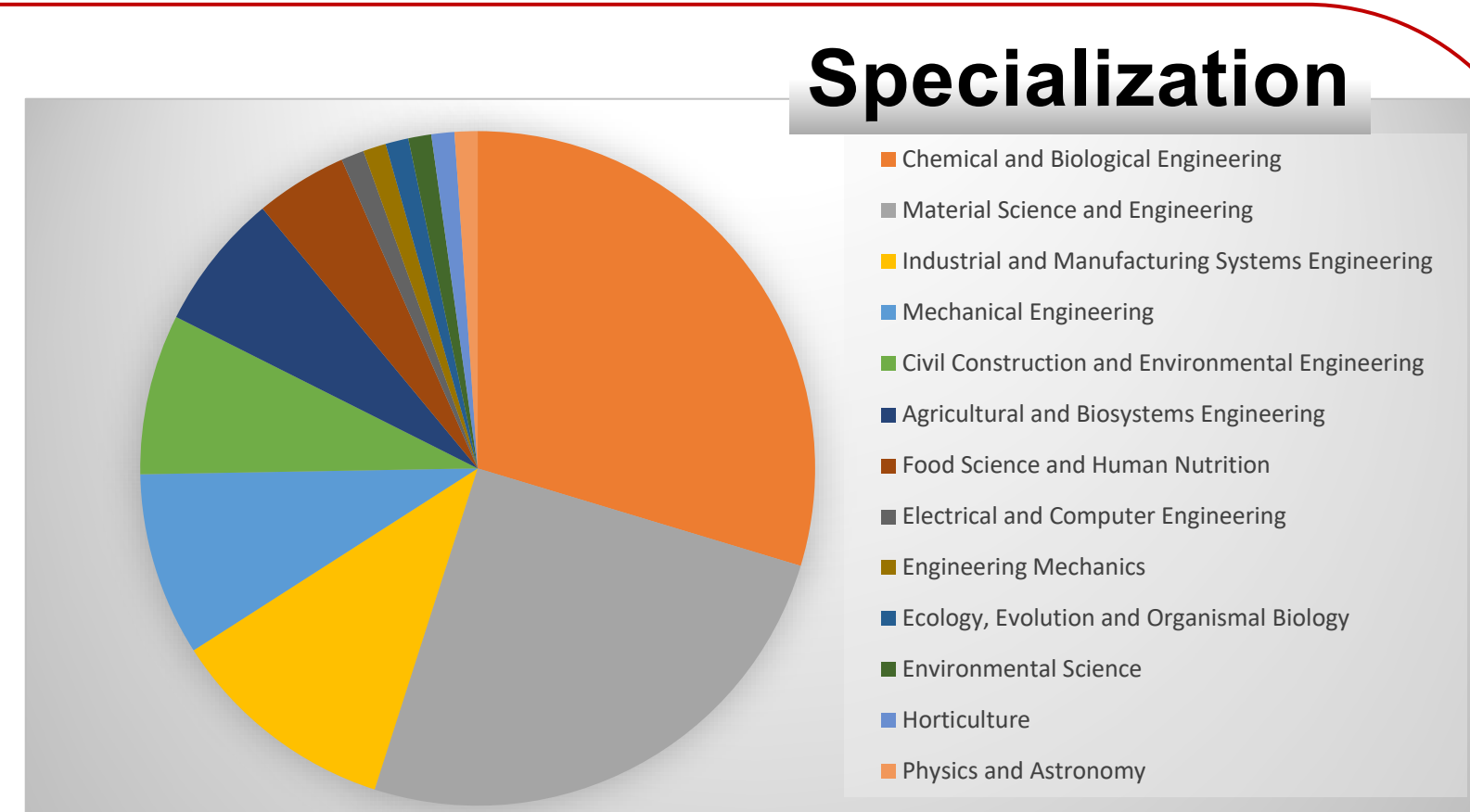
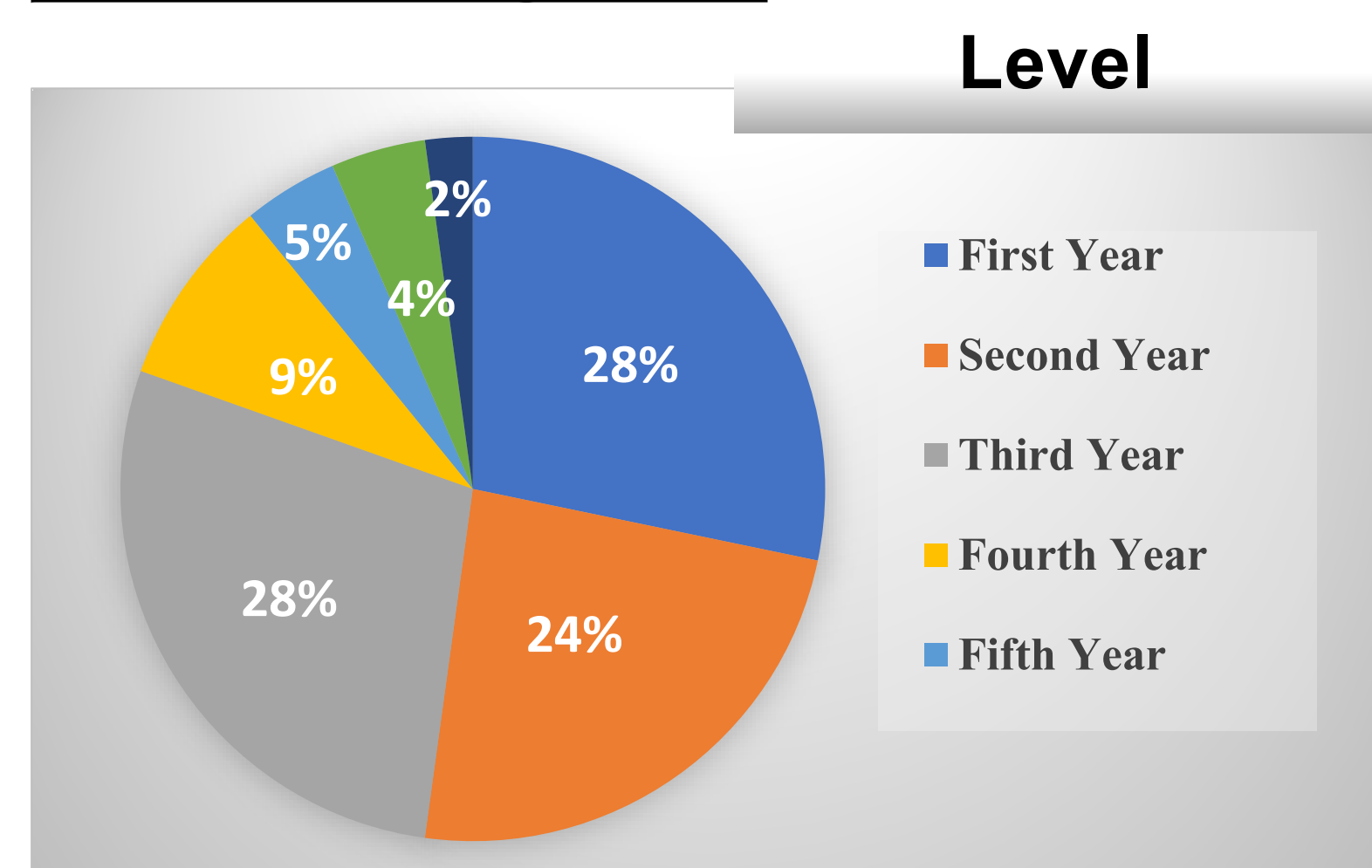


### Participation

#### Increased participants over time

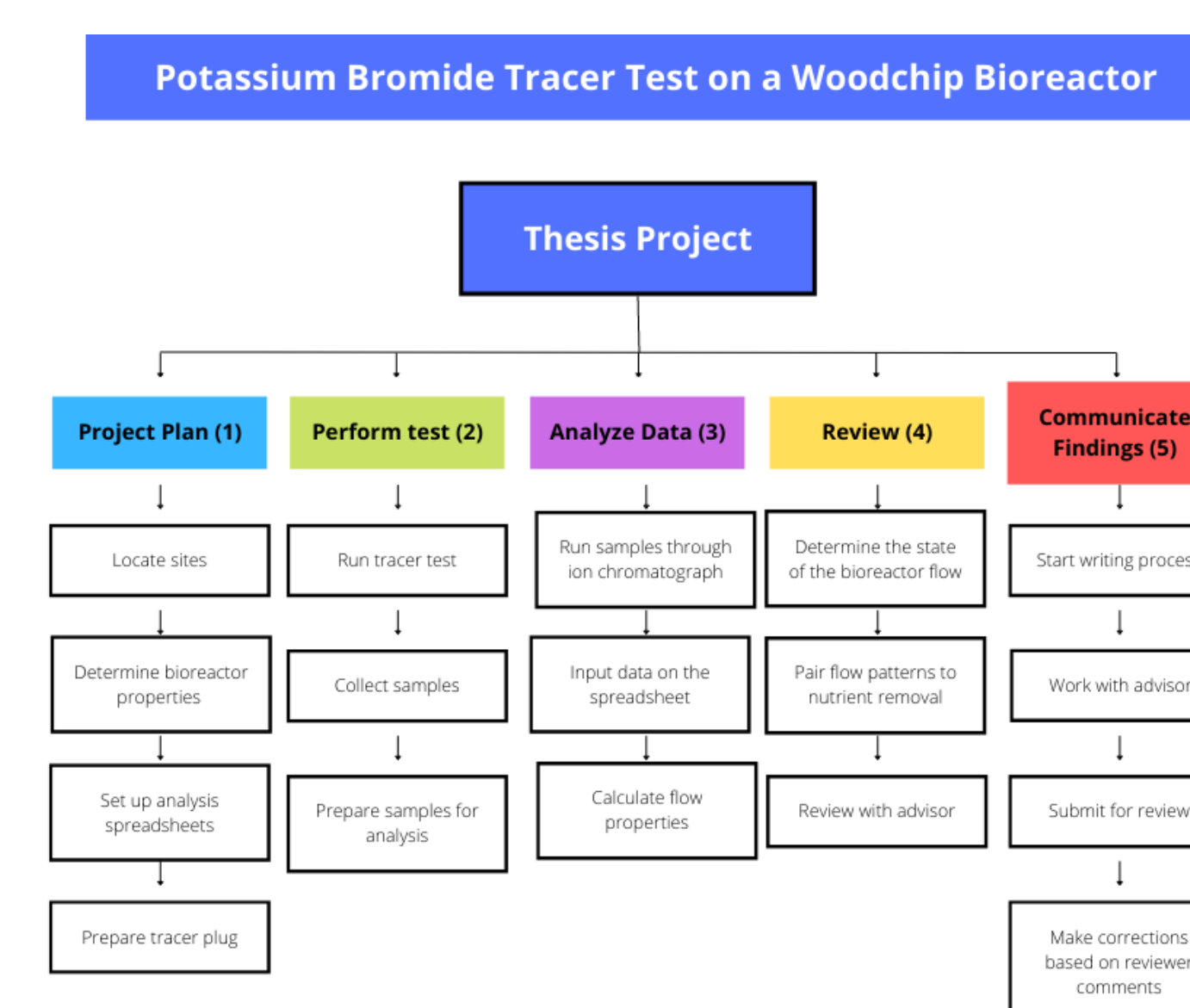
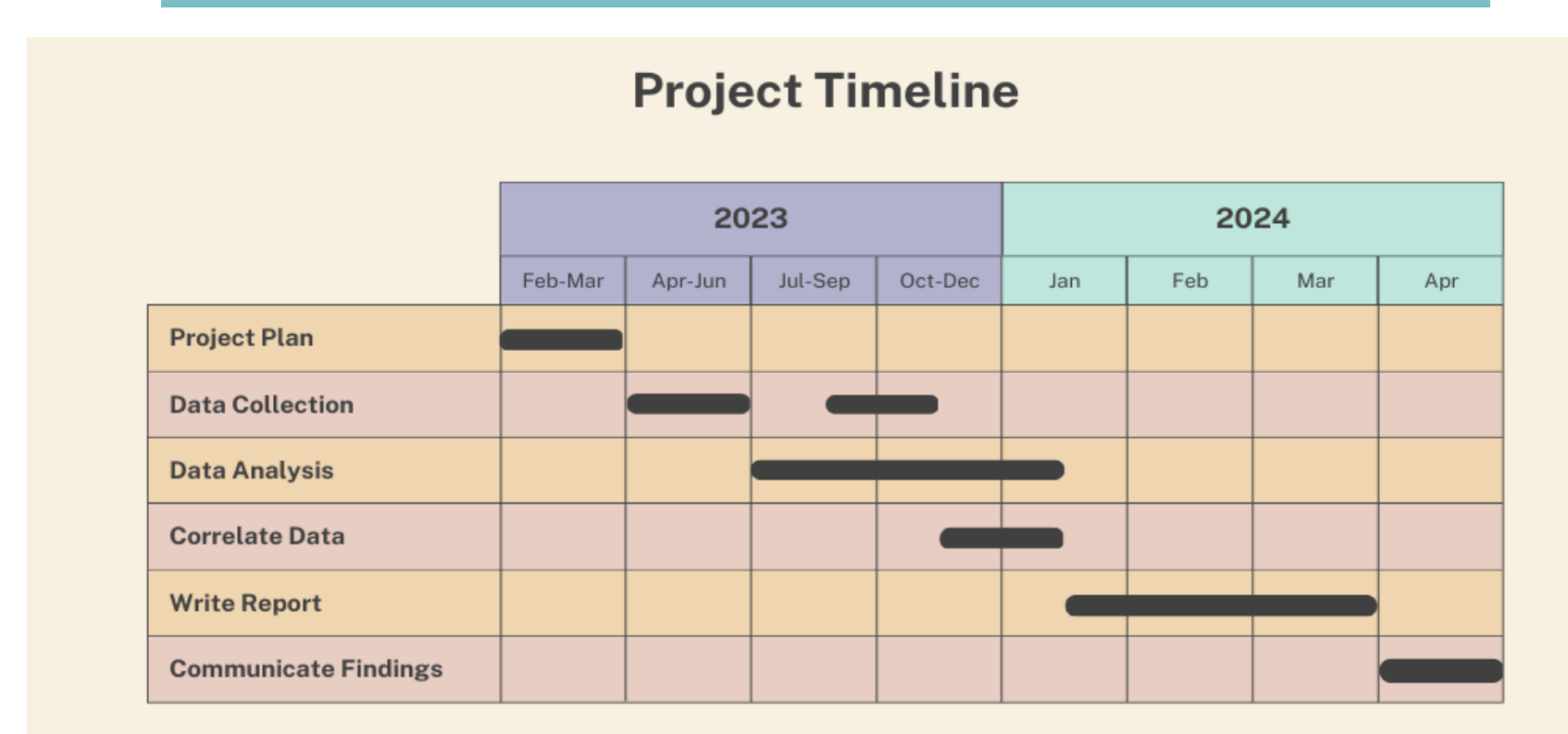


#### Diverse background



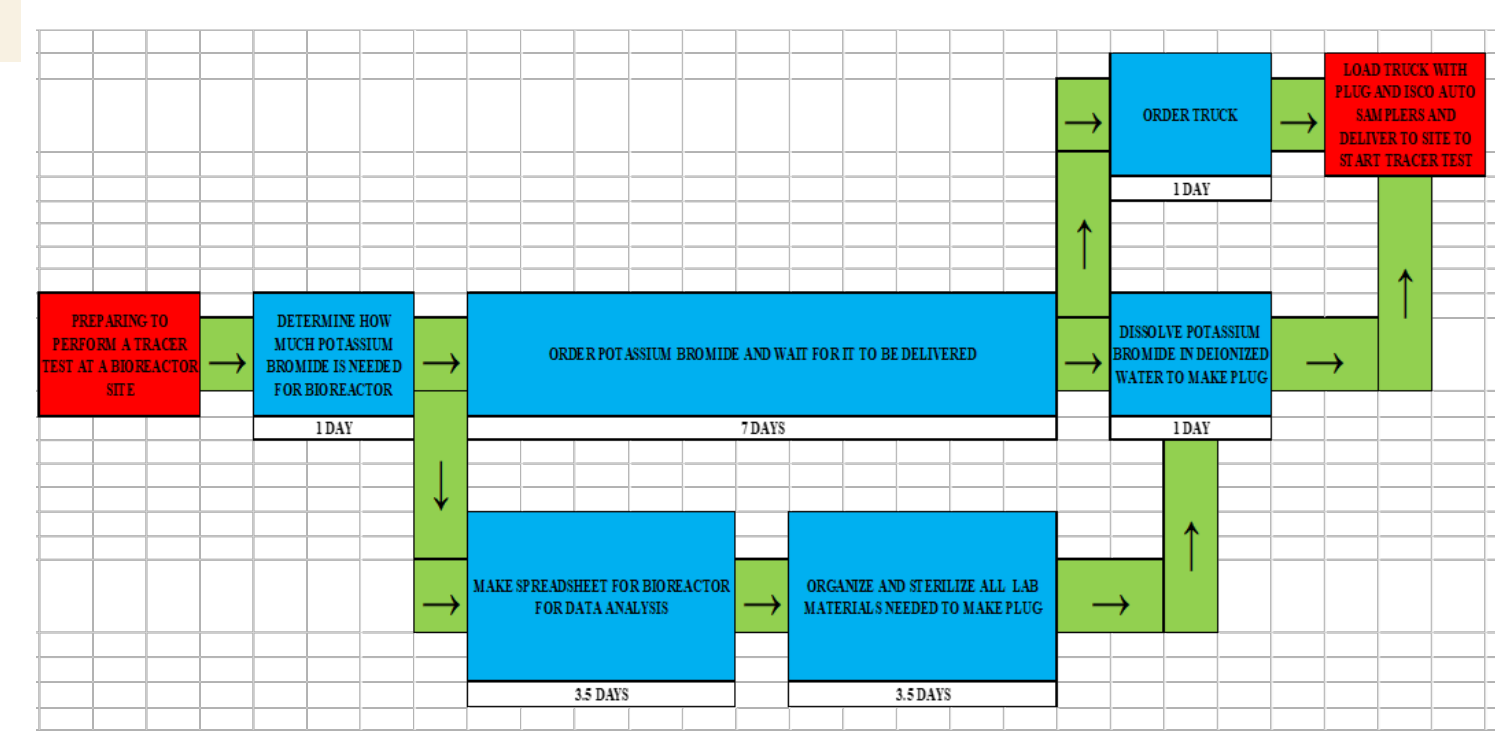
### Student Work

#### Project Charter & Gantt Chart



#### Work Breakdown Structure

#### Kanban Board



#### Critical Path for Thesis Research

### Achievements & Milestones

- **89.13%** agreed that “the course provided useful information”
- **86.96%** agreed that “I learned how to apply project management skills to a research thesis”
- **84.78%** agreed that “The course format was effective”
- **86.96%** would “recommend this course to others”
- **100%** (industry) and **87.5%** (academy) GAPS alumni agreed GAPS is helpful

- 7 cohorts, ~ 90 students
- 5 workshops, ~ 210 students
- 26 virtual lectures
- 33 guest lectures
- 60 in-person lectures



GAPS Cohort 5 Testimonial Video



GAPS Cohort 7 Students: In-class Activity



GAPS Workshop, Aug 2022

### Conclusions

- Successful establishment of coursework and workshop
- Increasing enrollment over time
- Positive student impact and learning experience

### Publications

1. S. Jiang, A.M. Gansemer-Topf, N.F. Nigel, G.E. Okudan Kremer, Q. Li, *ASCE North Midwest Section Annual Conference* 2020
2. A.M. Gansemer-Topf, Q. Li, S. Jiang, G.E. Okudan Kremer, N.F. Nigel, *ASCE North Midwest Section Annual Conference* 2020.
3. A. Gansemer-Topf, S. Jiang, N. Reuel, G.E. Okudan-Kremer, Q. Li, R. Mort, D. Chen, *ASCE Midwest Section Conference* 2021.
4. Ann M. Gansemer-Topf, Shan Jiang, Yiqi Liang, Qing Li, Nigel Reuel, *AERA Annual Conference* 2023.
5. A. Gansemer-Topf, S. Jiang, Y. Liang, D. Chen, Q. Li, N. Reuel, G.E. Okudan-Kremer, *ASCE Annual Conference & Exposition* 2023.