

Learning through Discovery

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ABSTRACT

Building career foundations is one of the three core tenets of the Discovery Program at Johns Hopkins University Applied Physics Laboratory (APL). New college graduates selected for this cohort-based rotational program create these foundations through the program's carefully constructed training and mentoring component, which was developed collaboratively by Discovery Program leadership and APL's Talent Development Office. To ensure that training is immediately relevant and useful, training opportunities are sequenced strategically throughout the program and offered at just the right time in the staff members' evolution. This article describes the approach to helping APL's Discovery Program staff members build strong foundations that will serve them well throughout their careers.

INTRODUCTION

*Learning happens in the mind;
development happens in the world.*

APL's Discovery Program is a 2-year rotational opportunity for recent college graduates that consists of four rotation assignments spanning multiple technical areas across the Laboratory. With its three core tenets—broad exposure, professional connections, and career foundations—the program aims to help staff members develop critical knowledge and skills and facilitate their placement in sectors and departments that are the best fit for both the organization and for the individual's continued career growth. Ultimately, the program's vision is to create a persistent, collaborative, and innovative network of impactful staff who will lead us into the future.

Through their technical rotations, Discovery Program staff members gain broad exposure to projects across the Lab and they forge lasting professional connections. To realize the final tenet, career foundations, these staff members also participate in mentoring and training experiences as part of the program. They complete a series of professional development training sessions, including an effective presentation course and a project introducing them to the APL innovation ecosystem. These training experiences prepare them to engage immediately with colleagues and sponsors and actively contribute to innovation.

The Discovery Program leadership team partners with APL's Talent Development Office to create a curriculum, content, and a schedule that supports the goals

of the program. APL's Talent Development Office offers an always-evolving portfolio of diverse non-credit educational opportunities for APL staff members. Courses generally fall into five categories: technical training, computer applications and programming, career development and critical success factors, leadership and management development,¹ and diversity and inclusion.

When developing the training plan for the Discovery Program, all aspects of the process are driven by a clear intention: to lay an early foundation for Discovery Program staff members' long-term success at APL. The program gives staff members space to take risks, explore, learn, and grow, while providing structure, support, and just-in-time learning. While technical rotations are the highlight of the Discovery Program, the care and intentionality built into growing staff members' nontechnical competency is equally important.

Starting from an understanding that success at APL requires more than just great technical abilities, all the classes, activities, events, and processes are designed to develop well-rounded individuals over time and through real-world experience. Throughout the program, specific trainings are offered at specific times to ensure they are relevant and useful for current responsibilities and staff member needs. In addition, all training is reinforced before, during, and after via ongoing individual performance coaching conversations and tie-in to other current program activities such as presentations and team challenges. Development activities also include non-training learning and social experiences such as the APL Staff Orientation Program (ASOP), conference attendance, sponsor engagement opportunities, networking activities, and cohort social events.

The Discovery Program leadership engaged APL's Talent Development Section as consultants and partners rather than as simple vendors of prepackaged training. In true collaboration, both sides brought their expertise and worked together to develop content and experiences to best serve the program staff members. As a result, learning and development opportunities span across the 2-year program, as well as across multiple levels of individual, cohort, and program development (Figure 1).

What started as a simple request for delivery of a particular training has grown into a true learning journey for each cohort member. Discovery Program staff members gain in the first 2 years of their careers what most of us take many years to experience and learn—beginning with effective cohort team development, through just-in-time learning on a variety of topics, to individual performance coaching and mentoring. Just as staff members are able to experience the technical rotations that are at the center of this program, they also have an opportunity to participate in a variety of exploration and training activities throughout their 2 years. This variety creates new experiences, ideas, relationships, and maturity for each staff member. The Talent Development Office is honored to be part of this evolution.

JUST-IN-TIME TRAINING APPROACH

Topics are introduced just as staff members need to use them and are incorporated into real-world projects and deliverables that are visible to important stakeholders. This timing creates genuine motivation to learn, immediate practice of new skills, and real opportunities for feedback and coaching. This forethought, follow-up support, demand, and feedback are what make good training great.

In addition to providing a broad experience of technical work and opportunities at the Lab, the program helps staff members develop, or deepen, their self-awareness, self-management, self-advocacy, emotional intelligence, collaboration, networking, and team skills. As mentioned earlier, this process takes place across time and through multiple activities.

The program flow generally follows the situational leadership approach espoused by Posner and Kouzes.² Early in any development process, learners need specific direction, instruction, feedback, and technical guidance. Over time, as they develop experience and competence, they require less direction and need more coaching. As confidence and skill develops, the learner becomes ready for more challenging and complex assignments. The Discovery Program uses this iterative process to help build resilience, confidence, and a continuous learning

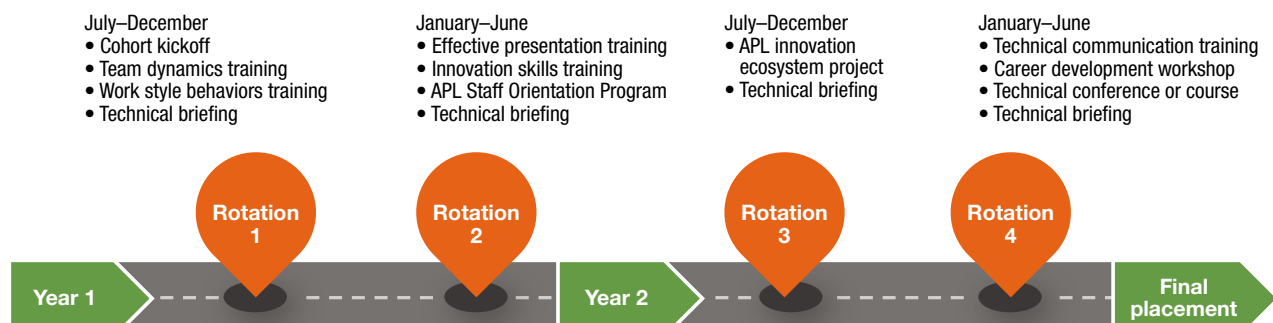


Figure 1. Discovery Program training timeline.



Figure 2. Discovery staff members participating in a team-building exercise.

mindset. The goal being that, in the end, as staff members leave the Discovery Program, they become both the expert and the director of their own ongoing development. Both the program leaders and curriculum structure provide the scaffolding to support them on this journey.

THE FLOW

As they start their journey at APL and embark on their first of four technical rotations, Discovery Program staff members are dealing with the same dynamics as any new APL employee. They are learning the APL culture, processes, and norms, while simultaneously learning their technical roles and developing relationships inside and outside their Discovery cohorts. They are enthusiastic and eager to learn, but they benefit from structure and guidance. Because teams and relationships are so important at APL, this guidance includes an introduction to team dynamics (Figure 2) to support them in collaborating and moving between teams smoothly and effectively across their careers. It also includes a course called *Manage Yourself to Success*, which uses the DiSC styles³ instrument to help them modify their behaviors to work effectively with others and builds self-advocacy skills they can use in both their Discovery cohorts and in their technical teams.

As they move into their second technical rotation and are getting more comfortable at the Lab, they are

also being asked to do more—to take on more, to speak up more, and to get involved in growing and evolving their technical projects. During this phase of the program, Discovery staff members are tasked with presenting to sponsors, technical teams, cohort members, and others. Formal training at this time coincides with this tasking and includes a course on presentation skills. In addition, by this point, the staff members have enough experience at APL to begin looking for new ideas, vision, and inspiration—to be innovative and play a role in this instrumental element of the Lab. To this end, they have the option to participate in innovation skills training through APL's Innovation Program Office.⁴

By the time their third rotation gets started, staff members are deep into learning and growing from numerous experiences and challenges. Rather than focusing on more formal training, this period is built around honing these skills through new challenges. The Discovery Program Challenge Project asks staff members to work and innovate in teams with their fellow cohort members by putting together a proposal for a sponsor challenge inside APL's innovation ecosystem.⁴ This activity tests their teaming, collaboration, and innovation skills without the formal leadership structure they are used to. The experience provides opportunities to practice leadership and influence skills with peers, skills that are critical to success at the Lab. In addition to the challenge itself, there is a formal briefing to key stakeholders. Personal presence, communications, and team dynamics are all developed in this process.

As staff members embark on their last rotation, many are expanding their networks beyond APL by attending professional technical conferences and getting involved in other APL initiatives and communities. By this time, they all have acquired a toolbox of skills and a network of relationships they can pull from for the rest of their careers. Also at this point, as they are deciding how they would like to focus their professional careers, they take the online career development workshop modules and use the Lab's career development resources to match their skills, values, and interests to their final placement. They also receive technical communications training so that they can enhance their careers through technical writing skills and potential publication.

IMPACT BEYOND DISCOVERY

Because of its success in onboarding and developing staff members, the Discovery Program has drawn the interest of other development-focused groups around the Lab, such as the KEYS (Knowledge to Empower Young Staff) program. KEYS is designed to help recent graduates transition to work life, acclimate to APL culture, find resources, etc. KEYS is looking to extend the Discovery Program's approach, building blocks, and knowledge to its larger community of new-graduate hires at

APL. Developing the future generations of visionary, inspired, courageous, impactful, resilient, and agile team members is a team sport, and the Discovery Program provides an excellent role model for this important work.

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