



FOUNDATIONS FOR SUCCESS

Curriculum and program design recommendations for Enterprise for Youth



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INTRODUCTION

- Oliver Wyman (OW) has partnered with Enterprise for Youth (Enterprise) to enhance the latter's program and curricula content, specifically to help Enterprise develop skills-based training and accelerate career opportunities in tech and healthcare fields for under-resourced youth in the San Francisco Bay Area
- This presentation summarizes key insights and conclusions from our engagement and offers recommendations on Enterprise's future program design and curricula to help better position Enterprise youth for securing internship opportunities and succeeding during the internships
- Material that informed the development of this report include:
 - 2020 Enterprise Tech and Healthcare Hiring Directors Survey
 - 2020 Enterprise Site Supervisor Focus Groups Narrative
 - Eight interviews with HR and talent professionals from leading tech, healthcare and biotech companies in the Bay Area
 - Supporting secondary research
- While the research took a holistic approach to assessing workforce needs and opportunities in the target industries, an emphasis was placed on the technical job categories within tech, healthcare and biotech (e.g., software engineering, data science, medical practice, bioscience) and their corresponding technical skills that are traditionally associated with those industries
- Based on conversations with talent professionals, the report also highlights a few high-growth non-technical job functions (i.e., sales, marketing, HR, operations) within the target industries that offer valuable career development opportunities for Enterprise participants



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THE MOST COVETED ATTRIBUTES IN EARLY TALENT ACROSS INDUSTRIES INCLUDE DRIVE, INTERPERSONAL SKILLS AND PROBLEM SOLVING

Top skills and attributes firms look for and value across tech, healthcare and biotech



Note: Glossary of professional skills in the appendix Source: 2020 Enterprise for Youth Tech and Healthcare Hiring Director Survey, Oliver Wyman interviews, Oliver Wyman analysis

Interpersonal skills Cognitive skills

Intra-personal skills

IN SUMMARY: IN-DEMAND SKILLS BY INDUSTRY BASED ON RESEARCH AND INTERVIEWS WITH TALENT PROFESSIONALS

Top skills wanted in tech, healthcare, and biotech

(not in order of importance)

	Tech	Healthcare	Biotech
Professional skills	Communication skills	Communication skills	Communication skills
	Teamwork	Teamwork	Teamwork
	Emotional intelligence	Empathy	Writing
	Leadership	Attention to detail	Learning agility
	Learning agility	Learning agility	Attention to detail
	Creativity	Resilience	Research
	Resilience	Ethics	Ethics
	Drive	Drive	Drive
Technical skills	Software development	Healthcare assistance	Data analytics
	Data analytics	Mental health practice	Quality control
	Engineering	Nursing	Bioinformatics
	AI/ML learning	Software development	Analytical chemistry
	Cloud computing	Rehabilitation therapy	Biostatistics
	IT security	IT security	IT security

Note: Glossary of professional skills in the appendix; the three categories of professional skills follow the framework developed by National Research Council Committee on the Assessment of 21st Century Skills Source: Oliver Wyman interviews, Oliver Wyman analysis

THE FOUR KEY TAKEAWAYS THAT IMPACT ENTERPRISE'S CURRICULUM AND PROGRAM

1 Professional skills matter more

First and foremost, firms **look for early talent with strong professional skills.** Talent professionals point to the relative importance of aptitude and attitude over expertise in specific technical skills. Repeatedly we heard that organizations prefer talent with strong professional skills and limited technical skills to individuals with poor professional skills and deep technical skills.

2 Be an avid learner and helper

As the starting point of a career journey, internships help students learn and grow as much as possible. Talent managers highlight **drive**, **curiosity**, **interpersonal skills and a growth mindset as key differentiators of youth who succeed as interns.** Individuals can demonstrate these differentiators by taking the **initiative to take notes in meetings**, **actively participate in meetings**, **regularly seek feedback**, **and work to build relationships and mentorship opportunities**.

Technical competency is a bonus

Overall most firms primarily look for well-rounded talent with great professional skills, **some technical job families have required specific technical skills** (i.e., coding for software engineers, certification for nurse assistants). Non-technical job families tend to look for broad, transferrable professional skills.

Non-technical roles offer opportunity

While we may primarily think of technical roles for tech and healthcare companies, there are also **many high-growth non-technical functions that present valuable career opportunities,** such as sales, marketing, HR and operations.



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TALENT PROFESSIONALS WITHIN TECH AND HEALTHCARE STRESS THE IMPORTANCE OF EARLY INDUSTRY EXPOSURE FOR YOUTH

Skills youth workforce development agencies should focus on to augment young people's training

2020 Enterprise for Youth Hiring Director Survey, top 10 answers (N = 32)



Interview quotes on early industry exposure

Learning how to code early is beneficial for future internship prospects – having a level of exposure to coding would give you a leg up

Students who participated in handson projects such as hackathons early on tackle technical interviews well compared those who did not

We look for students who can connect their academic or extracurricular experiences to the positions they are applying for

Source: 2020 Enterprise for Youth Tech and Healthcare Hiring Director Survey, Oliver Wyman interviews, Oliver Wyman analysis

LEADING YOUTH JOB READINESS PROGRAMS OFFER MULTIFACETED CAREER EXPOSURE AS WELL AS AN INTRODUCTION TO TECHNICAL SKILLS (1/2)

Tech-related learning programs designed for teens

* Denotes program with attendance fees

Organization	High-level program details
Girls Who Code	 Seven-week summer immersion program for rising 11th, 12th grade girls with little to no prior coding experience, offering project-based coding learning covering app development, web design, robotics (Scratch, Python, Arduino C, HTML, CSS, JavaScript) Coupled with career development through a speaker series, workshops, field trips
AI 4 ALL	 Summer immersion program for underrepresented high schoolers that partners with leading universities to offers hands-on learning on the application of AI through academic lessons, research projects, field trips, and mentoring
All Star Code	 Six-week curriculum designed for high school boys of color that offers project-based coding learning which covers the fundamentals of JavaScript, game design (p5.js), web design/ development (HTML/ CSS), API/database Coupled with core job readiness training
Intel - Oakland Unified School District (OUSD) STEM Pathways	 CS and engineering pathway programs based on work-based learning, consisting of excursions, internships and immersion experiences at Intel and Georgia Tech, professional mentoring, as well as workshops and resources for teachers and parents Pathway courses: computer organization / architecture, programming, graphic design, web design / development (HTML), ethics, maintaining networks, and robotics
Mission Bit	 Six-week summer bootcamps on web design (HTML, CSS), game design (Unity, C#), etc. A variety of after-school coding courses, workshops, career talk series, and field trips for under-resourced youth

Source: Oliver Wyman analysis

LEADING YOUTH JOB READINESS PROGRAMS OFFER MULTIFACETED CAREER EXPOSURE AS WELL AS AN INTRODUCTION TO TECHNICAL SKILLS (2/2)

Healthcare/Biotech-related learning programs designed for teens

* Denotes program with attendance fees

Organization	High-level program details
Medical Immersion Summer Academy (MISA)*	 Five-day program that involves shadowing, mentoring, clinical immersion, and hands-on medical technique training (learning EKG, suturing, CPR, splinting and taking vitals) CPR & First Aid Certification
The Center of Excellence High School Summer Enrichment Science Academy	 Six-week residential program for rising 11th/12th graders focusing on science-related material including biology, chemistry, medical terminology, computer science, accompanied by career exposure in clinical settings through shadowing, workshops, and excursions Priority given to underrepresented, under-resourced youth
Stanford Medical Youth Science Program	 Five-week residential program for low-income, underrepresented 10th/11th graders consisting of anatomy courses, hands-on lab sessions, hospital internship, research project, workshops, and mentoring
National Student Leadership Conference on Medicine & Healthcare (NSLC)*	 Nine-day summer session for high schoolers on select college campuses offering a number of interactive medical experiences including clinical rounds, medical examination, surgical techniques, medical simulation project, clinical excursions, etc.
Kaiser Permanente Launch	 A host of paid internship opportunities for under-resourced youth Placements across many administrative roles such as accounting, communications, customer service, hospital operations, procurement
Biotech Academy by Biotech Partners	 Hands-on academic and lab training program related to biotech for underrepresented youth, followed by a eight-week paid summer internship at an bioscience company or institution Coupled with basic job readiness training such as resume-writing and job interview workshops

Source: Oliver Wyman analysis

IN SUMMARY: HOW LEADING JOB READINESS PROGRAMS STRUCTURE THEIR CURRICULA

Content structure

- High-profile programs couple work-based learning with relevant coursework in order to also prepare the youth for the majors and programs that are linked to their future careers. Most frequently covered activities include:
 - <u>Tech</u>:
 - Work-based learning: hackathons, app development, web design, game design
 - Coursework: JavaScript, HTML/CSS, Python
 - <u>Healthcare/Biotech</u>:
 - Work-based learning: clinical rounds, medical examination, surgical techniques
 - Coursework: biology, medical terminology, chemistry
- Work-based learning typically includes both hands-on learning (e.g., hackathons, lab projects) as well as shadowing, effectively exposing participants to other roles and functional areas within the industry

Facilitation

- Many programs are offered via partnerships with higher education institutions and industry players, leveraging the former's faculty, labs, and other educational resources and the latter's industry expertise and career development resources
- Given the current COVID-19 pandemic, most programs are now being held online and provide remote learning and mentorship options

These peers of Enterprise present insightful benchmarks, as well as potential partnership opportunities

Source: Oliver Wyman analysis



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RECOMMENDATIONS FOR ENTERPRISE PROGRAM AND CURRICULUM DESIGN

OW Recommendations

A. How to implement additional technical skills training

- **B.** How to further augment the core job readiness curriculum and internship placement program
- **C.** How to secure future internship partnerships in a post-COVID world

OBC WE RECOMMEND A THREE-PRONGED APPROACH TO IMPLEMENTING TECHNICAL SKILLS TRAINING

Continue to pair work-based learning with further coursework

- Work-based learning provides youth with deep, multifaceted industry exposure across different settings, roles and functional areas
- Work-based learning also gives students opportunities to develop relationships with professionals in the industry, setting the ground for networking and mentorship
- Broader inclusion of coursework not only helps youth with career development but also gives them a head start on college admission and majoring

Continue to deploy a partnership model

- Teaching technical skills through partnerships with higher learning institutions, industry players, or other organizations with proven, sharable learning platforms provides great time and resource savings
- Partnerships provide deep expertise and educational/career development resources, as well as helpful inspirations and benchmarks
- Partnerships will also help Enterprise further tap into the target industries and the peer education network

Embrace remote learning

- Remote learning necessitates rethinking around productivity, engagement and "Zoom fatigue" among students to ensure desired impact
- In the absence of in-person interactions, there is a need for more frequent touchpoints between students and supervisors to share progress, questions and feedback
- Continuation of remote learning also requires ensuring a sufficient supply of digital hardware and tools for students

Source: Oliver Wyman analysis

OBC SUGGESTED CURRICULUM CONTENT FOR TECHNICAL SKILLS THAT INVOLVES BOTH WORK-BASED LEARNING AND COURSEWORK



Work-based learning:

- Web development/design¹
- App development
- IT Support/Troubleshooting
- Graphic design
- Robotics

Related coursework:

- Coding² (common languages such as JavaScript, HTML/CSS, Python)
- Computer Applications (computer hardware, operating systems, server administration, network security basics, network concepts, etc.)

Work-based learning:

- Medical research
- Hospital operations
- Lab work/comportment
- Basic medical techniques (EKG, suturing, CPR, etc.)
- Clinical rounds/medical examination

Related coursework:

- Medical terminology¹
- Anatomy
- Biology
- Chemistry
- Computer science

^{1.} In summer 2020, Enterprise launched a joint venture with Mission Bit for web development and filmmaking courses, and another with City College of San Francisco for its summer health terminology course 2. Talent leaders stressed that firms are largely language-agnostic when it comes to software engineering – they are mainly interested in seeing the candidate's general coding competency Source: Oliver Wyman analysis

ABC

ENTERPRISE CAN FURTHER STRENGTHEN ITS JRT CURRICULUM BY AUGMENTING INTERVIEW PREPAREDNESS AND PROBLEM-SOLVING SKILLS REQUIRED IN THE WORKPLACE

Current Enterprise JRT Workshop Curriculum

W1	Youth get to know each other through team building games, reflect on their ideas about success , and start thinking about summer internships
W2	Youth will learn about resumes, cover letters, and references . They will begin putting together their resume and checking in with staff to set some goals .
W3	Youth will begin putting together their cover letters and checking in with staff to set some goals .
W4	Youth learn to communicate clearly and professionally with coworkers and potential employers.
W5	Youth learn to communicate clearly and professionally with coworkers and potential employers.
W6	Youth learn the basics of personal finance and complete MyPath modules and activities
W7	Understand how to utilize the job bank, general workers' rights in California, and be familiar with local college support organizations
W8	Youth go offsite to practice their interview skills in an unfamiliar place with a new person (volunteer)

Suggested additions to the Curriculum

(W3) Have students get to know their employers better

Students **conduct in-depth research on the future employer** and reflect that knowledge on the cover letter and during the interview, increasing their appeal from the employer perspective

(W4+) Introduce unique storytelling and personal branding

Students learn how to tell an authentic, cohesive story that effectively communicates their unique strength or "superpower" to supervisors and coworkers

(W7+) Prepare students how to problem-solve at work

Students acquire basic **problem-solving skills** needed in professional settings, especially around **how to independently obtain and analyze relevant information and resources** to get to the answer (e.g., asking clarifying questions, notetaking, consulting online resources)

Source: Enterprise for Youth Job Readiness Training Curriculum, 2020 Enterprise for Youth Site Supervisor Focus Groups Narrative, Oliver Wyman interviews, Oliver Wyman analysis

^{1.} Enterprise curriculum now includes G-Suite certification for its students

Ways intern supervisors can help their interns succeed

2020 Enterprise for Youth Hiring Director Survey, top 7 answers (N = 32)



Supporting quotes from focus groups and interviews

We encouraged interns to schedule as many one-on-ones with as many people in the company across all departments and roles so they could get a broader sense of the work that we do

We set up **daily check-ins** between interns and mangers as well as **lunch meet-ups** with executive committee members for interns to get to know them

We build a network of **previous intern** "alumni" who have continued employment after the summer **to nourish the next group of interns** as they onboard and receive training

Source: 2020 Enterprise for Youth Tech and Healthcare Hiring Director Survey, 2020 Enterprise for Youth Site Supervisor Focus Groups Narrative, Oliver Wyman analysis

A B GFINALLY, ENTERPRISE CAN HELP ILLUMINATE NEW OPPORTUNITIES FOR ITSPARTICIPANTS AS THE ECONOMY EVOLVES IN A COVID-19 WORLD

Main trends precipitated by COVID-19

- Significant increase of teleworking and remote operations
- Increased need for smart devices and infrastructure
- Acceleration of digital healthcare, administration and retail sectors (e.g., payments, e-heath, online food shopping and delivery)
- Investment in pharma R&D and healthcare systems modernization
- Strengthened focus on health and well-being, leading to new habits (e.g., self-care, telemedicine) and needs (e.g., clean air, data sharing)
- Anxiety to be addressed through tailor-made offering, premiumization, real-time information, insurance and other services
- Homes becoming the new hub for daily lives, including multi-purpose facilities

Source: Oliver Wyman analysis

Industries expected to grow post COVID-19



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APPENDIX A

ADDITIONAL GRAPHS FROM 2020 ENTERPRISE FOR YOUTH HIRING DIRECTORS SURVEY

MOST COVETED SKILLS IN PROSPECTIVE HIRES

Q1. In your regular recruitment process what are the three top skills, talents, and attributes you look for in people you're planning to hire?



% of hiring directors surveyed (N = 32)

1st choice

Source: 2020 Enterprise for Youth Tech and Healthcare Hiring Director Survey, Oliver Wyman analysis

SUGGESTED AREAS OF FOCUS FOR YOUTH WORKFORCE TRAINING

Q2. Is there a way that a youth workforce development agency can augment a young person's training so that they can be successful in your field?



% of hiring directors surveyed (N = 32)

Source: 2020 Enterprise for Youth Tech and Healthcare Hiring Director Survey, Oliver Wyman analysis

WAYS TO FOSTER AN INCLUSIVE, ENGAGING LEARNING ENVIRONMENT AT INTERNSHIP SITES

Q3. If you have hosted an intern in the past, what did you do so that the intern could connect and feel welcomed in your office? What skills did you teach the intern in order for them to be successful?

% of hiring directors surveyed (N = 32)



Source: 2020 Enterprise for Youth Tech and Healthcare Hiring Director Survey, Oliver Wyman analysis

APPENDIX B

MISCELLANEOUS

KEY FINDINGS DIRECTLY PULLED FROM 2020 ENTERPRISE FOR YOUTH SITE SUPERVISOR FOCUS GROUPS NARRATIVE



Enterprise Program feedback



Success tips for prospective interns

Internship site supervisors who participated in the focus groups "spanned a variety of professional sectors, which also provided the opportunity to connect and use each other as a shared resource"

Strengths

- "Smooth process of matching and placing youth in their specific sites"
- Alignment of interest between job fields and the selected interns
- Administrative support during intern onboarding

Area(s) of improvement

 "Additional guidance and structure" needed for the interview process between supervisor and prospective intern

Top skills and attributes crucial to success

- Curiosity
- Determination
- Self-starter mentality
- People skills
- Attention to detail
- Accountability

Other insights and tips

- Conducting advanced research on the internship site
- Asking proactive questions
- Communicating their personal interests
- Observing basic professionalism ("having pressed and ironed clothes to having a notepad during meetings")

Source: 2020 Enterprise for Youth Site Supervisor Focus Groups Narrative, Oliver Wyman analysis

TECHNOLOGY COMPANIES ARE LOOKING FOR JOB-SPECIFIC TECHNICAL SKILLS, NOTABLY IN SOFTWARE DEVELOPMENT AND DATA ANALYTICS



Source: World Economic Forum, Business Insider, Forbes, LinkedIn, Society for HR Management (SHRM), Oliver Wyman interviews, Oliver Wyman analysis

HEALTHCARE GROUPS SEEK SPECIFIC MEDICAL CERTIFICATIONS AS WELL AS TECHNOLOGY EXPERTISE



Source: World Economic Forum, California Life Science Institute, The Coalition of State Bioscience Institutes, Society for HR Management (SHRM), AAPC, Elsevier, Oliver Wyman interviews, Oliver Wyman analysis

IN-DEMAND SKILLS AND ROLES IN BIOTECHNOLOGY COMPANIES GENERALLY REQUIRE HIGHER EDUCATION DEGREES AND EXPERIENCE



OW INTERVIEW LIST

Name & Title	Organization	Sector
Ben Putterman, Head of Global Sales Readiness	LinkedIn	Technology
Rita Li, HR Director	еВау	Technology
Dalana Brand , VP of People Experience and Head of Inclusion & Diversity	Twitter	Technology
Gillian Emblad, Physician Assistant	Kaiser Permanente	Healthcare
Rebecca Watters, M.D., Psychiatrist	Baywell Psychiatry Group (previously at UCSF)	Healthcare
Elizabeth Nguyen, Head of Recruitment	MyoKardia	Biotech
Fran Benjamin, Head of Talent	GRAIL (previously at AirBnB)	Biotech
Steven Antoine, Talent Manager	GRAIL	Biotech

GLOSSARY OF KEY PROFESSIONAL SKILLS REFERENCED BY TALENT PROFESSIONALS



Abilities to perform problem solving, critical thinking, and systems thinking

- Attention to detail
- Creativity
- Curiosity
- Learning agility: ability to learn from experience and apply that learning to perform successfully under new or firsttime conditions
- **Research:** ability to locate, extract, organize and evaluate relevant information



Interpersonal skills Abilities to adeptly communicate and

interact with other people

- Accountability
- Communication skills
- Emotional intelligence: ability to identify and manage one's own emotions as well as others'
- Empathy
- Leadership: ability to influence and lead others into action
- Teamwork
- Writing: ability to communicate clearly and appropriately in writing



Intrapersonal skills Abilities to plan, guide and monitor one's own behavior flexibly

- Adaptability
- Drive
- Ethics: ability to follow standards of behavior to preserve integrity
- Honesty
- **Resilience**: ability to recover quickly in times of stress
- Time management
- Work ethic

Note: Some skills that are not as self-explanatory as others have supporting explanations to aid understanding

Source: National Research Council (US) Committee on the Assessment of 21st Century Skills, Indeed.com, Oliver Wyman analysis

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