



# Fred Hutch Career Launch Program

Lab Technician Pathway

# PARTNERS & PROGRAM DESCRIPTION

Fred Hutch, Shoreline Community College, Shoreline School District, and WA Alliance for Better Schools are partnering to offer an opportunity to fast-track into a career in Bio-Science as a Lab Tech at Fred Hutch while continuing an education towards a degree in Biotechnology





# OUR TEAM OF PRESENTERS



**DAN GALLAGHER** – CTE DIRECTOR / SHORELINE PUBLIC SCHOOLS

**RACHEL RAWLE** – INSTRUCTOR / SHORELINE CC

**MARY GRACE KATUSIIME PH.D** – PROGRAM MANAGER / FRED HUTCH

**JEANNE CHOWNING PH.D.** – ASSOCIATE VP, SCIENCE EDUCATION / FRED HUTCH

**JAMES THOMAS** – SR. PROJECT MANAGER / WABS

# CAREER PATHWAYS

THERE ARE MANY DIFFERENT WAYS TO ATTAIN A CAREER AND BE COMPETITIVE AGAINST OTHERS INTERVIEWING FOR THE SAME JOB. SOME OF THESE PATHWAYS INCLUDE:

4-Year degrees

2-Year degrees

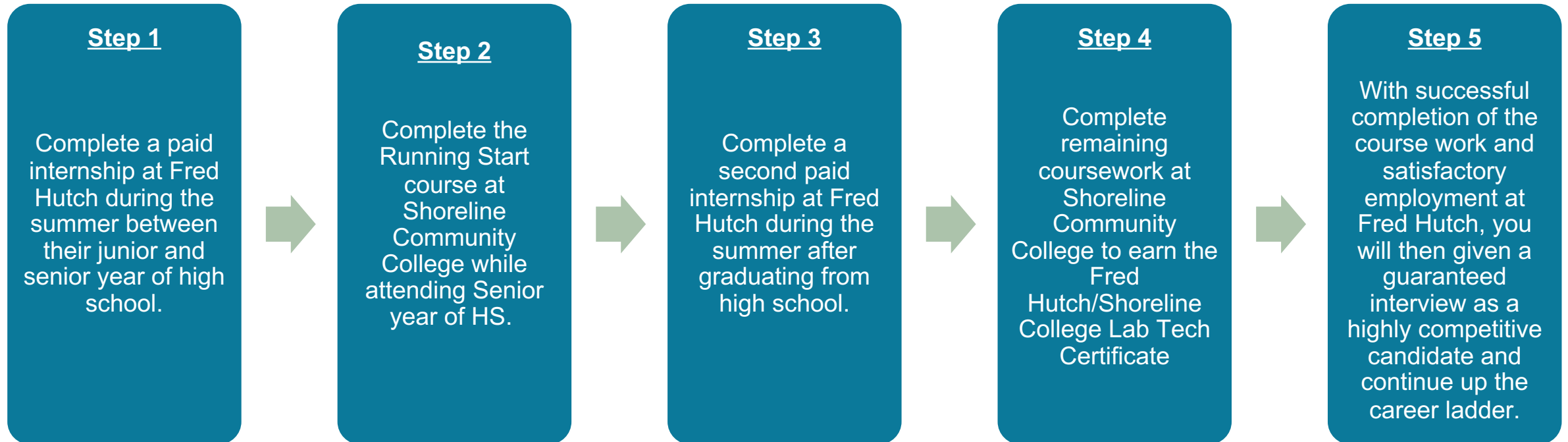
Certificates

Apprenticeships

*Career Launch Programs*



# Lab Tech Career Launch Model





# PROGRAM ELIGIBILITY



- Must be a current high school junior (grade 11) in Shoreline
- Must be interested in fast tracking with a Career Launch program that includes worksite learning in internships and earning a college certificate
- Must be interested in entering the workforce upon completion of the 2-Year program



# Fred Hutchinson Cancer Center

# Fred Hutch: Who we are

- The Fred Hutchinson Cancer Center (Fred Hutch) is one of the leading cancer research centers in the world and home to three Nobel laureates.
- Fred Hutch employs more than 5,700 people in a wide range of occupations.



# Fred Hutch: Mission

- Our mission is to eliminate cancer and related diseases that cause human suffering and death. We conduct high quality research to improve the prevention and treatment of cancer and related diseases such as HIV/AIDS and COVID-19.
- Our research develops novel treatments and offers patients the opportunity to participate in potentially life saving clinical trials to treat their disease.



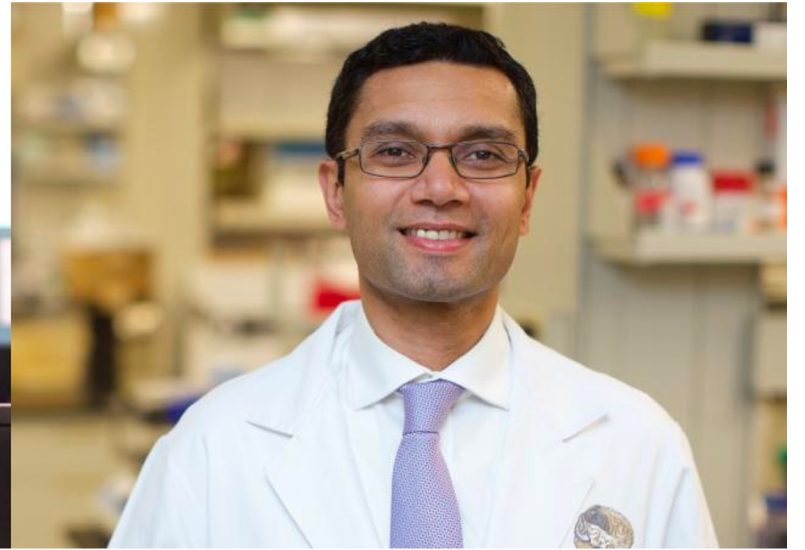
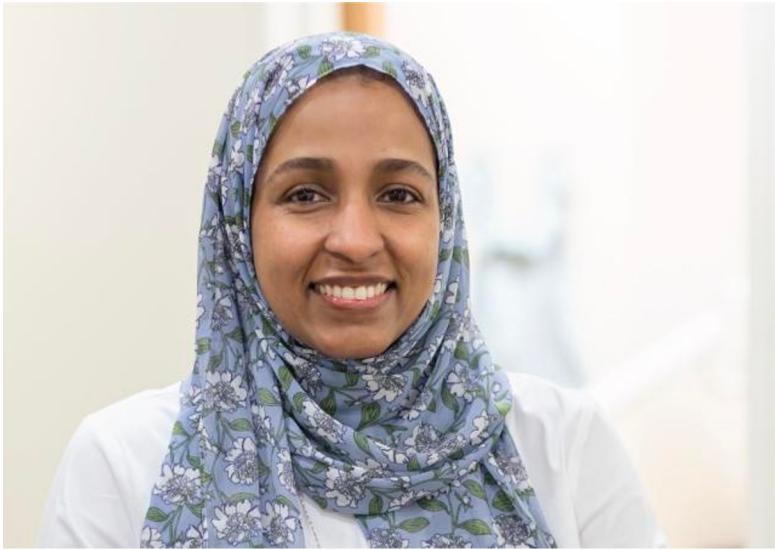
# Fred Hutch: Science Education and Training

- We prepare the next generation to work at the cutting edge of science.
- This includes high school students, secondary school teachers, college and graduate students and postdoctoral fellows.
- Our programs aim to inspire diverse students through science education and authentic research opportunities.



# Fred Hutch: Career Opportunities

- Several career types exist within Fred Hutch ranging from lab technicians, research administrators, medical writers to name a few..
- The center hosts career awareness and career pathway opportunities for students at high school, undergraduate and postgraduate levels.



# Fred Hutch Paid Internship: First Day and Orientation

- Begin at 9AM on Wednesday, July 5th, 2023
- Introductions and meet the science education team
- Tour of Fred Hutch
- Meet your mentor and visit your lab
- Lunch
- Hands-on introductory lab training

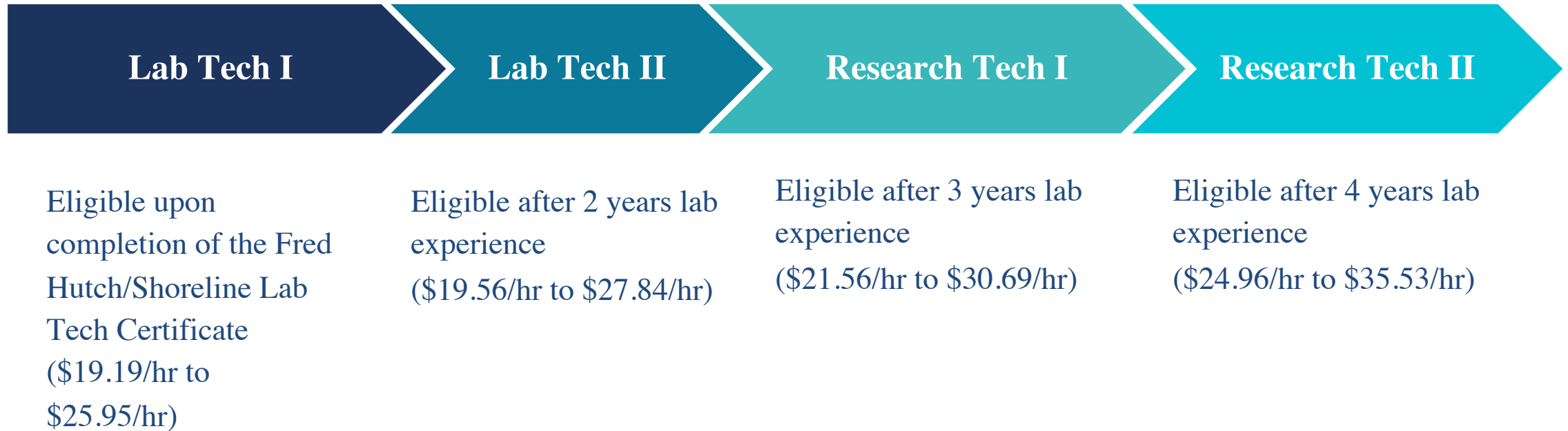


# Fred Hutch Paid Internship: Lab Duties and Training

- Assisting with experiments and set-up
- Logging and storing sample specimens
- Preparing lab solutions and reagents
- Cleaning and maintaining lab equipment
- Attending lab meetings
- Performing literature search
- Attending professional development sessions with other interns



# Fred Hutch: Sample Lab Tech Career Progression



# Fred Hutch: Paid Internship Summer#1 2023 Timeline

Paid 6 weeks internship at Fred Hutch: July 5th - August 16th  
40 hours per week; \$20/hr\*



\* This amount is pre-tax. Tax will not be automatically taken from your paycheck. You will need to pay taxes out of funds received.

# Fred Hutch/Shoreline Community College Lab Technician Certificate

## Program Overview



# What is the SCC learning environment like?

Brand new BioScience facilities with dedicated Biomanufacturing lab (opening fall 2023)  
Dedicated teaching labs with facilities that include:

- Molecular Biology / Immunology lab
- Tissue culture lab
- High Performance Liquid Chromatography (HPLC)
- Flow Cytometry
- Biomanufacturing lab with Bioreactor
- Microbiology



# Your SCC Support

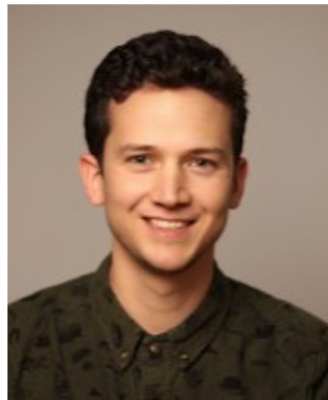
## Biotech Group



**Maribel Tirado**  
Career Navigator



**Diana Ensenat**  
Instructional Lab  
Technician



**Orlando de Lange**  
Instructor



**Kristine Petesch**  
Instructor



**Rachel Rawle**  
Instructor



**Jan Chalupny**  
Instructor

## Campus Resources

- Running Start Office
- Writing Center
- Tutoring Services
- Student Accessibility Services
- Funding & Financial Aid
- Career Coaching
- Multicultural Center
- Gender Equity Center
- Counseling Center

# Specific Course Sequence 2023-2024

Quarter	Course Number	Course Title	Credits
<u>High School Junior Year</u>			
Summer 2023	Fred Hutch Internship 1		
<u>High School Senior Year</u>			
Fall 2023	BIOL 111	Principles of Biomanufacturing I	3 (Running Start)
Winter 2024	BIOL 112	Principles of Biomanufacturing II	3 (Running Start)
Spring 2024	BIOL 113	Principles of Biomanufacturing III	3 (Running Start)
	<i>The Principles of Biomanufacturing courses are shorter and scheduled in the afternoons/early evenings so that students do not need to reduce their high school course schedule to participate.</i>		
Summer 2024	Fred Hutch Internship 2 <i>(Students who did not complete high school chemistry will also enroll in CHEM&amp; 121 for 5 credits)</i>		

# Specific Course Sequence 2024-2025

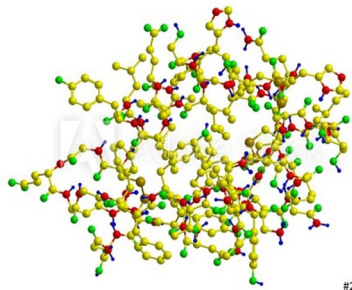
Quarter	Course		Credits
<u>Post High School Year</u>			
Fall 2024	Cellular Biology	Media Prep*	14
	Statistics*	College Success in STEM	
Winter 2025	Microbiology + Lab	Computer Applications	13
	Molecular biology Lab		
Spring 2025	Tissue Culture	Media Prep II	15
	Recombinant DNA Techniques	Business Communications	
Summer 2025	Option to take two of:		4
	Bioinformatics	Flow Cytometry	
	Lab Techniques in Medical Diagnostics	Biotechnology Techniques	

*\*Options exist for these requirements to be met through high school coursework*

# What will you learn?

## SENIOR YEAR – PRINCIPLES OF BIOMANUFACTURING

WHAT IS BIOTECHNOLOGY?  
WHAT IS BIOMANUFACTURING?



#287513898

HOW TO GENETICALLY ENGINEER  
BACTERIA



HOW TO WORK IN A CLEANROOM



HOW TO ASSEMBLE A BIOREACTOR



# What will you learn?

## METHODS

DNA extraction, purification  
and analysis

PCR

Molecular cloning

Protein expression,  
purification and analysis

## THEORY

DNA replication

Gene expression

Protein biochemistry

Recombinant DNA  
techniques

Microbiology

## CAREER SKILLS

Communicating technical  
content

Working collaboratively

Documenting effectively

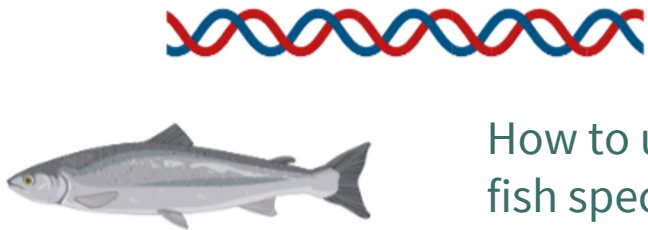
Interpreting and using data

Using arithmetic on the fly

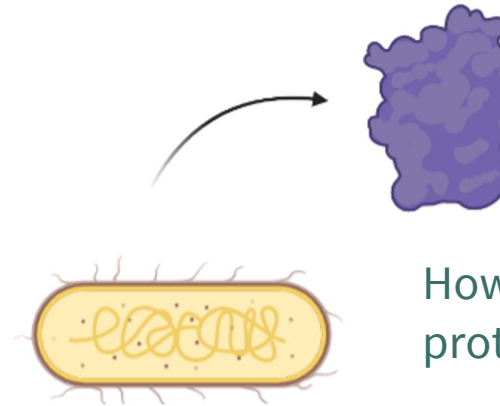
Applying for jobs - From 1st  
approach to interviews

# What will you learn?

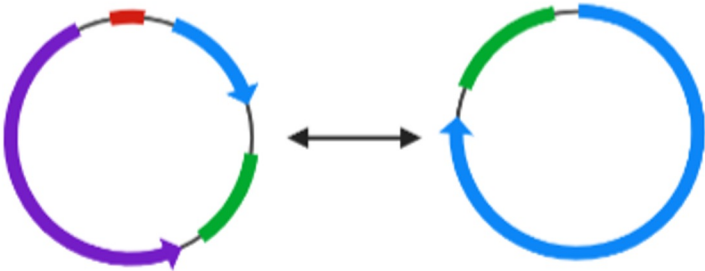
## EXAMPLES OF PROBLEMS YOU'LL LEARN TO SOLVE



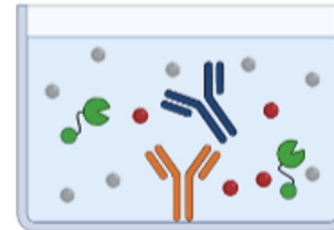
How to use DNA to ID a fish species from just a tiny piece of meat



How to turn bacteria into protein factories



How to mix and match pieces of DNA with precision



How to harness antibodies to screen patient samples for diagnostically relevant molecules

% Completion for Degrees & Program Prerequisites @ SCC					
Degree Earned		Maximum Percentage of the Degree Met by Completing the Fred Hutch Lab Tech		Programs	Maximum Percentage of the Pre-requisites Met by Completing the Fred Hutch Lab Tech
AA-ADT (General Transfer)		38%		Biotechnology Lab Specialist Certificate of Completion	86% of the pre-requisites 45% of the program requirements
AST-1 (Science Track 1)		28%		Biotechnology Lab Specialist, AAA-S	46%
				Dental Hygiene, AAA-S	36%
AST-2 (Science Track 2)		17%		Nursing, AAS-T	44%
				Medical Laboratory Technology, AAA-S	59%

# Identifying Counselor Or Teacher For Letter Of Recommendation

You will be required to have a teacher or counselor submit a Letter of Recommendation which speaks to your qualifications and character as a potential candidate for this program.

In your application, you will provide the name and email address of the teacher or counselor who be submitting this letter as a reference on your behalf.

Upon completion of your application, the teacher or counselor identified will be contacted by email with information on how and where to submit their letter.

Important: Discuss with the person you wish to write your letter before submitting their name as part of your application.



# SUMMARY OF TIMELINES

## APPLICATION TIMELINE

March 31	Application due
April 14	Letter of recommendation due
April 28	Successful applicants notified
May 12	Registration for Biomanufacturing Running Start courses completed

## PROGRAM TIMELINE

July 5 - August 15	Summer Internship #1
12th grade year	Biomanufacturing Running Start courses plus 12th grade high school schedule
Summer 2024	Summer Internship #2
College year	SCC coursework
<b>Spring 2025</b>	<b>Certificate complete– Begin your career!</b>

**APPLY HERE:** <https://www.fredhutch.org/en/about/education-outreach/hutch-advance/lab-tech-program.html>

**ASK QUESTIONS AND RECEIVE HELP WITH YOUR APPLICATION:**  
<https://forms.gle/uwqZSJEt9DCYpovD6>



# SUPPORT STAFF AND CONTACT LIST



Mary Grace Katusiime, PhD  
Science Education Program Manager  
Fred Hutchinson Cancer Center  
Email: [mkatusii@fredhutch.org](mailto:mkatusii@fredhutch.org)



Dan Gallagher  
Role: CTE Director  
Shoreline School District  
Email: [dan.gallagher@ssd412.org](mailto:dan.gallagher@ssd412.org)



Mirabel Tirado  
Career/Student Navigator  
Shoreline Community College  
Email: [mtirado@shoreline.edu](mailto:mtirado@shoreline.edu)



James Thomas  
Sr. Project Manager  
Washington Alliance for Better Schools  
Email: [james@wabsalliance.org](mailto:james@wabsalliance.org)

# QUESTIONS

