

Water/Wastewater Technology Program
Advisory Board Meeting
April 12, 2023

Agenda

- I. Introductions
- II. Mission Statement
- III. Overview/Recent History
- IV. Enrollment Trends
- V. Course Formats
- VI. Program Additions and Changes
- VII. Water Lab Improvements
- VIII. Pathways
- IX. CSU San Marcos: Certificate of Specialized Study in Water Management & Leadership
- X. Marketing and Outreach
- XI. Good of the Order

I. Introductions

The following Advisory Board Members accepted the April 12th Advisory Board Meeting invitation:

- a. Robbie Brown, Chief Plant Operator, WASPO, Cal Fire -present
- b. Chris Clemens, System Operations Supervisor, SDCWA -present
- c. Melita Caldwell-Betties, Faculty Chair-Water Supply Technology, San Bernardino Valley College -present
- d. Patty Duran, Human Resources Analyst, SDCWA
- e. Steve Garner, Certification Manager, CA-NV AWWA -present
- f. Gary Gramling, Lead Instructor and Program Coordinator, Citrus College
- g. James Mattern, Chief Plant Operator/Operations Manager, Encina Wastewater Authority -present
- h. Michelle Peters, Technical and Compliance Manager, Poseidon Water
- i. Alan Styles, Director, Certificate of Specialized Study in Water Management & Leadership, CSU, San Marcos -present
- j. Christopher Trees, Director of Operations, San Elijo JPA -present
- k. Lisa Urabe, Public Information, Vallectios Water District -present

Palomar College Staff

- a. Jacob Shiba, Water Technology Program Coordinator -present
- b. Ashley Wolters, Department Chair, Trade and Industry
- c. Susan Wyche, Dean, Career Technical and Extended Education

II. Mission Statement

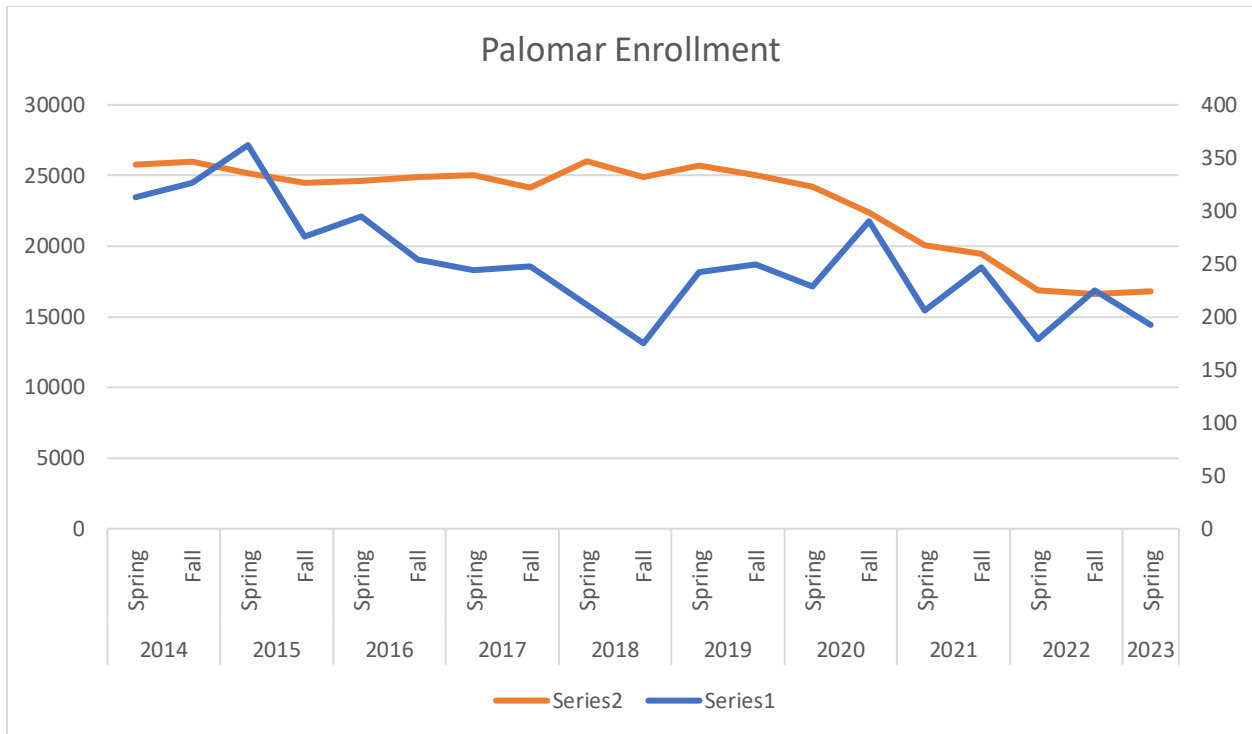
The Water/Wastewater Technology Mission Statement is:

Our mission is to educate and prepare students of diverse backgrounds, experiences, and abilities for careers and advancement in the water industry. Our committed, highly trained faculty and partnerships with Local, State, and National entities ensure that our graduates will have successful careers that improve their lives, their communities, and the economy.

III. Overview and Recent History

There are currently 11 active part-time faculty members. Water technology recently offered 10 and ran all classes in Spring 2023 and plans to offer 12 classes in Fall 23. I am continuously working with our Dean, Susan Wyche to lower course offering minimums and extended deadlines, which we saw for 3 of our classes in Spring 23.

IV. Enrollment Trends



V. Course Format Updates

As of Spring 2023, many lectures at Palomar College are still online and all labs are in-person. Backflow and Instrumentation are in-person for Water Tech, and water treatment piloted a hyflex format which allows students to choose to attend class in-person or on zoom for most lectures. See exhibit D, the course format survey.

We are still taking tours with students and have started an open house for students taking online classes to network in-person and check out what the water lab has to offer.

With the program running in a hybrid format, do we want to create a fully online degree? Separate from the existing degrees or remove the requirements for in-person labs?

The Board would like to offer a fully online degree in order to stay competitive in today's education market. Steve noted that all 28 of the AWWAs exams are fully online with the exception of the backflow exam.

They Would like a separate degree for the fully online one, that distinguishes the additional hands on training.

VI. Program Additions and Changes

Program Designation and Elevation

The program merger and elevation is complete. This includes the merging of the Wastewater Technology designation into the Water Technology Education (WTE) designation and converting all courses to the transferrable level. There will still be two separate Associate Degrees and Certificates of Achievement in Water Technology and Wastewater Technology.

Course	Current	Proposed	Change Type
Water Technology	WTE/WWT	WTE	Program Change
Calculations	WTE 50	WTE 149	Course Change
Water Distribution	WTE 52	WTE 152	Course Change
Water Treatment	WTE 54	WTE 154	Course Change
Instrumentation	WTE 56	WTE 156	Course Change
Backflow	WTE 58	WTE 158	Course Change
Public Works Management	WTE 60	WTE 160	Course Change
Cross Connection	WTE 62	WTE 162	Course Change
Lab Analysis	WTE 64	WTE 164	Course Change
Pumps, Motors, Hydraulics	WTE 66	WTE 166	Course Change
Waterworks Distribution II	WTE 72	WTE 272	Course Change
Advanced Plant Operations	WTE 74	WTE 274	Course Change
Wastewater Treatment	WWT 52	WTE 153	Course Change
Collections	WWT 54	WTE 155	Course Change
Advanced WWT	WWT 64	WTE 263	Course Change
Career Pathways	N/A	WTE 51	New Course
Fundamentals	N/A	WTE 102	New Course

New Courses considered being offered:

1. Water Efficiency and Safety- Currently offered as topics classes.
2. Advanced Water Treatment- working with Applied Membranes Inc. on donation of an RO demonstration set up.

3. We would also like to offer accelerated Summer courses and refresher courses.

4. Other Suggestions?

The board fully supports the addition of AWT as the priority.

VII. Water Lab

- a. Since 2020 Water Tech had been awarded Almost \$110,000 in Grant funding, with more potentially coming this spring
- b. We are currently remodeling the classroom with new desks and chairs, and will have a computer at each desk for each student.
- c. We are in the infant planning phase for building our own on-site wastewater treatment plant. We will collect and treat a portion of the flows from the San Marcos campus to tertiary water and reuse to offset irrigation. This is a massive undertaking, but I have the support of the Dean and am firming up private partnerships. This will allow students to get operating hours and will offset sewer and water fees for the college.

Is anyone willing to write a Letter of Support for this project?

Chris Trees and James Mattern are willing to write letters of support. Lisa will solicit a letter from VWD.

- d. We are still in the process of remodeling the outdoor water lab and have recently completed the design phase. We are proposing removal of the two existing water tanks in the outdoor lab and replacing with a mock distribution system that includes: permanent piping, mobile piping for wet taps, valves, pump/motor, micro tank, dosing station, and water sampling station.

Calls for a technical reviewer?

Chris Trees said he can review. Jacob will send to the group.

Suggestions for other/specific equipment?

- e. We are actively seeking donations and purchase discounts for equipment for the new lab including: 6" piping and fittings (PVC, ductile Iron, etc.), a variety of valves/regulators/actuators, a chemical feed system, tapping equipment, pump/motor, tank, etc.

We have received a few donations thus far including a pipe tapping system and valve actuator, and commitments from Received donations/commitments from Blue Earth Products, Cla-Val, Ferguson Waterworks, Georg Fischer Central Plastics, The Ford Meter Box Company, Mueller, BECK, and Hydra-Stop.

Please email Jacob for more info.

James mentored he may have some equipment and will keep the program in mind in the future.

- f. All backflow devices are now permanently mounted and by the end of spring all setups will include Backflow SIM units.

VIII. Pathways

- a. We are currently working with SMUSD to pilot a water technology pathway at the high school level. Students will take Fundamentals and career classes for high school and college credit. They will also visit water agencies throughout the semester.

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- b. Currently have one intern at Vallecitos Water District each semester. Currently for academic credit, but are offering a \$2,000 scholarship for the intern for Fall 2023. See exhibit C, Internship Outreach Flyer, resumes due 4/30.
- c. Continued participation in the Regional Internship Program. The 2023-2024 program is now in the recruitment phase, **please consider encouraging your agency to participate.**

IX. CSU San Marcos: Certificate of Specialized Study in Water Management & Leadership
Alan has received approval from CoBA Dean's Office to restart/resume the program. The next stage is to garner the level of support in the regional water community for a program restart/resume

X. Marketing and Outreach

- Cal-NV AWWA Meter Committee hosted at Palomar-Possibly end of July
- New CTE Specialist hired for outreach
- Potential Student Chapter for the CWEA
- Industry visits and guest speakers
- Military Outreach focused on Credit for Prior Learning
- Improved website- Added a certification and jobs page
- Career fairs and high school visits
- Social media- Instagram
- Student Surveys- Ongoing
- **Other Avenues?**

XI. Good of the order

Attachments

- A. Water lab photos
- B. Outreach flyer
- C. VWD internship flyer
- D. Spring 2023 Course Format Survey

Current Water Lab



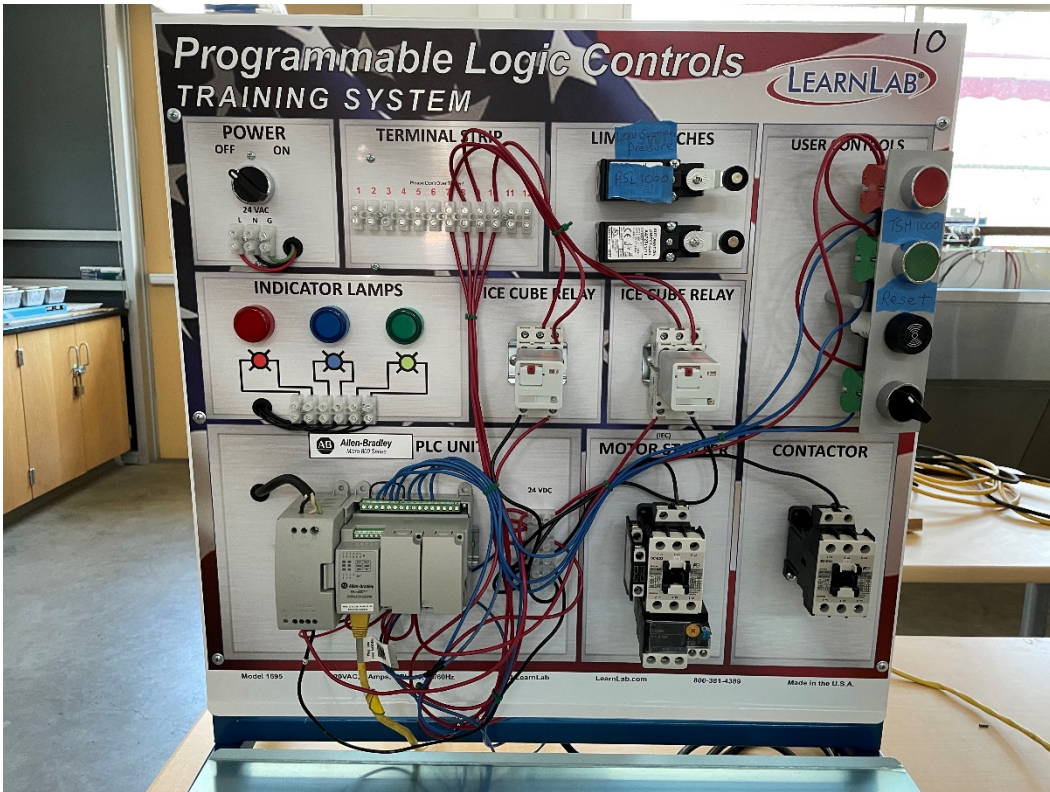
Old backflow units.



New Backflow Units



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WTE 156: Instrumentation



WATER TECHNOLOGY PROGRAM

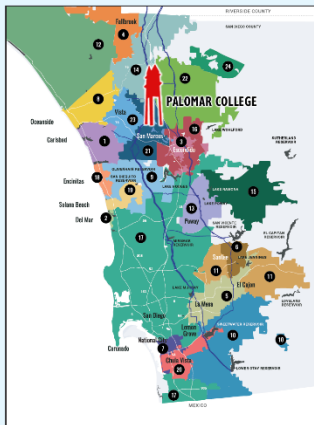


About Palomar's Water Technology Program

Our mission is to educate and prepare students for careers and advancement in the water industry. Nearly one thousand people in North San Diego County are working at public utilities to protect life's most precious resource. Many of these workers earn \$50,000 to \$150,000 per year without a four-year university degree required. About 35% of those employees will be eligible for retirement within the next three years.

An education in Water Technology from Palomar College opens doors to employment in publicly owned water utilities, private utilities, regulators, environmental consulting firms, and industry, particularly breweries.

The Palomar College Water Technology Program works cooperatively with the San Diego County Water Authority and other local agencies to provide practical, on-the-job experience to interested students, and a talent pipeline of potential candidates to the water/wastewater industry.



What is Water Technology?



Water Supply Treatment: Locating, managing, and cleaning water sources before being delivered to customers.



Water Distribution: Operating the entire system of pipes, pumps, motors, valves, and tanks to ensure safe and reliable delivery of water to homes and businesses.



Wastewater Collections and Treatment: the collecting of used water from homes and businesses followed by the safe removal of chemicals and other harmful pollutants at a wastewater treatment plant.

Courses offered:

- Water/Wastewater Math
- Water Distribution Systems
- Water Treatment
- Wastewater Treatment
- Wastewater Collections Systems
- Backflow Tester Training
- Cross-connection Specialist
- Pumps, Motors, and Hydraulics
- Electrical and Instrumentation
- Laboratory Analysis
- Public Works Management



Find out more:

<https://www2.palomar.edu/pages/watertech/>

 [palomarwatertech](https://www.instagram.com/palomarwatertech)

Contact Jacob Shiba at jshiba@palomar.edu or 760-744-1150 ext. 2744

PALOMARPOWERED Water Technology

Palomar College Water Technology Advisory Board Meeting April 12, 2023
VWD flyer

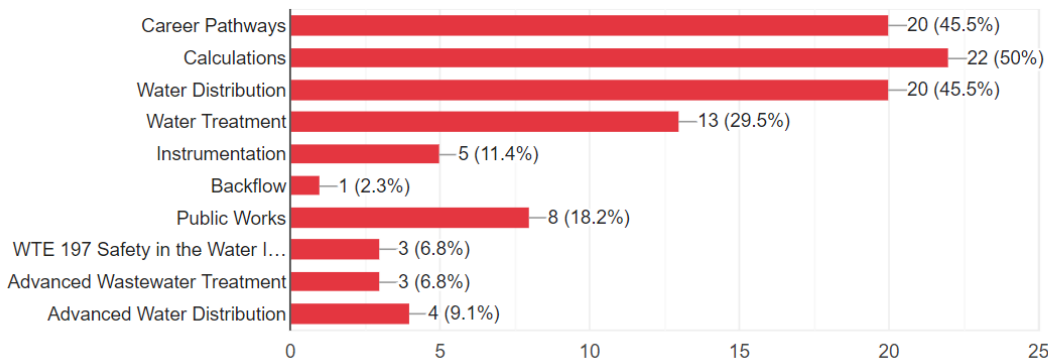
Spring 2023 Water Technology Course Format Survey

So far 44 students completed the survey that was sent out to all students currently taking water tech classes at Palomar, as well as people signed up for the program newsletter.

What course(s) are you currently taking in Spring 2023?



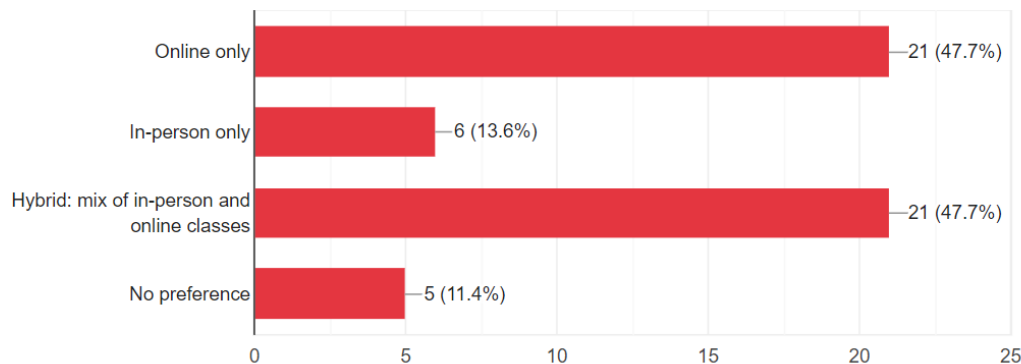
44 responses



What course format would you prefer in future semesters?



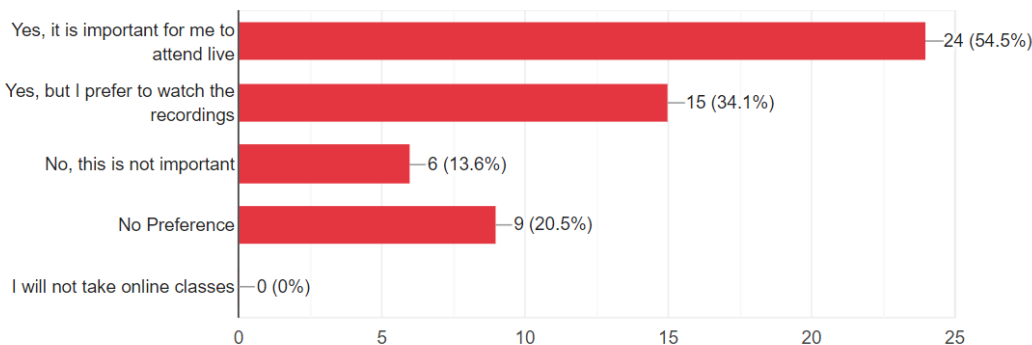
44 responses



For online courses, do you prefer to have a live Zoom meeting?



44 responses

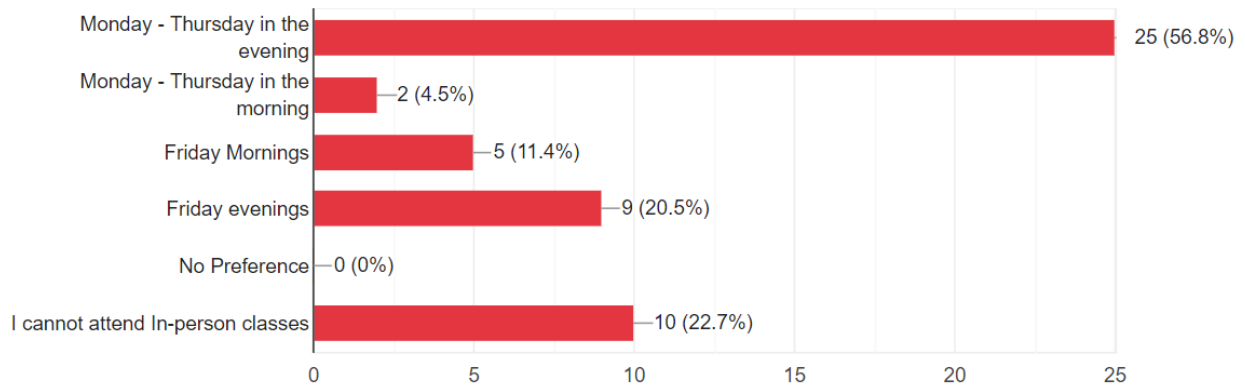


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For in-person courses, what days/times do you prefer?



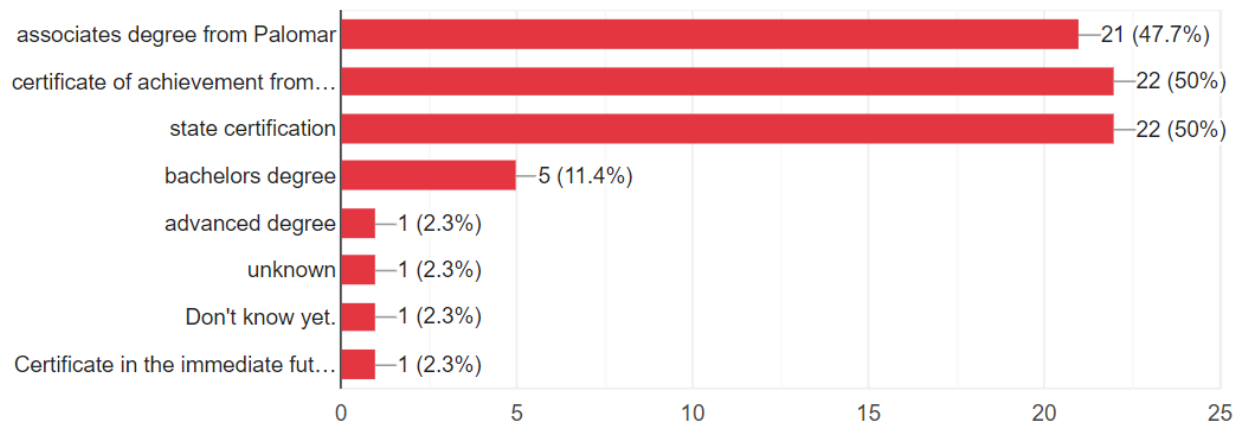
44 responses



I plan on pursuing a(an)



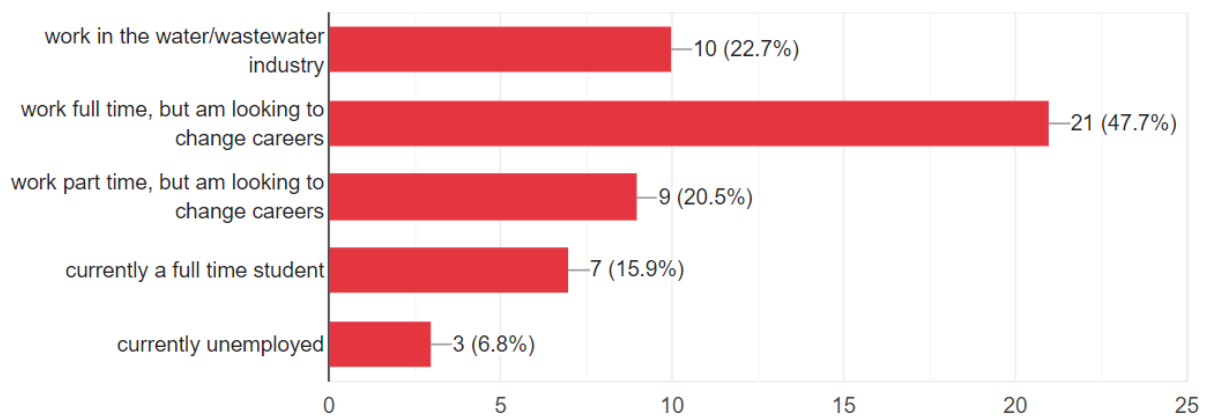
44 responses



For employment I currently



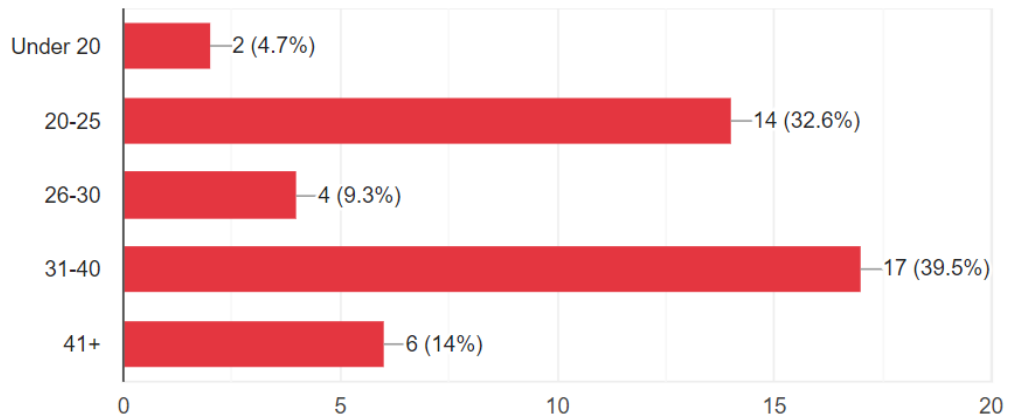
44 responses



What is your age category?



43 responses



Notable comments when asked about program improvements

- Offering more opportunities to network in person
- In person classes
- keep offering online classes
- Add accelerated courses in the summer.
- offer advanced plant ops in the spring as well as fall
- Classes like pumps and motors could be a lot better if it were in person.

Notable comments when asked what they like best

- I like that i can go to school full time and have these classes online.
- Online has been great
- Professors, course format/flexibility (Online and Hyflex), informative lectures, and job preparedness.
- The teachers are amazing!
- The availability of water courses
- The online option for courses is what I like best.
- The online courses that you can watch and take on your own time.
- Ability to take online classes.