We will assign 3 sessions in order of preference, if possible. While we’d like you to get your first choices, popular workshops fill up quickly. If all your choices are full, we will place you in other workshops. All of the workshops are terrific, and you may discover some great careers you hadn’t considered. Early registration will help you get your top choices.

**ADULTS MAY NOT ATTEND STUDENT SESSIONS. A CONCURRENT PROGRAM FOR ADULTS HAS BEEN ARRANGED AND IS DESCRIBED BELOW.**

**Financial Aid 101.** Providing an overview of financial aid, how to apply, what documentation is needed, understanding award information and applying for scholarships. Patricia Flores, Eric Torres, & Tatiana Rabon. Skyline College Financial Aid.

**Community College 101.** An exploration of College programs, processes, and resources. Jeremy Evangelista-Ramos. Skyline College Outreach.

**529: The Tax-Free Way to Pay for College.** How to ensure the growth rate on your college savings plan outpaces the inflation rate of college tuition on an after-tax basis—by eliminating tax on the growth. Willard Folsom & James Luippold. Castle Rock Wealth Management.

**EXPANDING YOUR HORIZONS**

**IN MATH & SCIENCE CONFERENCE**

**MARCH 14, 2020**

8:15 a.m. to 3:00 p.m.

Skyline College, San Bruno

A conference for 6th through 12th grade young women and interested adults to learn about career opportunities in math and science.
**SCHEDULE**

**8:15 – 9:00 a.m.** Pick-up registration packet

**9:00 – 9:30 a.m.** General Assembly I

**9:40 – 11:00 a.m.** Workshop 1

**11:10 – 12:30 p.m.** Workshop 2

**12:40 – 1:15 p.m.** Lunch

**1:25 – 2:45 p.m.** Workshop 3

**2:50 – 3:00 p.m.** General Assembly II

**HOW TO FIND US**

**SKYLINE COLLEGE**
3300 College Drive, San Bruno CA 94066

**From the North:** Westborough exit off I-280

**From the South:** Pacific, Skyline Blvd. (Highway 35) exit off I-280

**Public Transportation:** SAMTrans #140 from Pacifica and San Bruno BART

**FOR ALL CONFERENCE PARTICIPANTS**

Dr. Jannett Jackson  
*Interim President, Skyline College*

**“E-CUBED: EXPLORE, EXPERIENCE, EXCEL!”**

Bev McLean  
*Saint Mary’s College of California*

**CONFERENCE GOALS**

- To promote education as a means of expanding young women’s options.
- To increase young women’s interest in science and math.
- To foster awareness of career opportunities for women in science-and-math-related fields.
- To provide an opportunity for participants to meet and form personal contacts with women working in traditional and non-traditional fields.

**PROBLEMS & PUZZLE CONTEST**

Contest entry forms will be in your registration packet. **PICK IT UP EARLY.**

Answers will be due at lunch. Contest winners will be announced and prizes awarded at General Assembly II.

**PRIZES**

**A DAY WITH A SCIENTIST OR TICKETS TO:**

- Aquarium of the Bay
- Children’s discovery Museum
- CuriOdyssey at Coyote Point
- Fine Arts Museums of San Francisco
- Gilroy Gardens
- Hiller Aviation Museum
- San Francisco Maritime National Park Association
- S.S. Jeremiah O’Brien
- The Marine Mammal Center
- Walt Disney Family Museum
- AJ Bates
- Shari Bookstaff
- Christine Case
- Kevin Chak
- Arlene Chang
- Gary Cheang
- Stephen Fredricks
- Jon Freedman
- Mousa Ghanma
- Ray Hernandez
- Barbara Irlil
- Kylin Johnson
- Judy Lewis
- Lennon Smith
- Nadia Tariq
- Alana Utsumi
- Marco Wehrfritz
- Alyssa Wong-Conway

**SPONSORS**

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**PLANNING COMMITTEE**

You may park anywhere except in handicapped and red zones. Parking permits will not be needed for the day of the conference. The preferred parking is in Lot M.

**ARRIVAL**

WHEN YOU ARRIVE pick up your registration packet in the Gym, building 3.

CAMPUS BUILDINGS ARE CLEARLY MARKED; conference registration is in the Gym, building 3.

DURING THE CONFERENCE, Skyline College students will escort participants to their sessions.

THE MORNING SNACK includes juice and fruit. Lunch is a sandwich, fruit, and beverage.
WORKSHOPS FOR STUDENTS

MATH & COMPUTER SCIENCE

1. Let me tell you a secret! Keeping personal information confidential is much harder now that the internet exists. Your personal information is important, and you should only share it with who you want and when you want. Many individuals are interested in stealing your personal information for their own personal use. Learn the basics of cryptography used in secure communication. Gain hands-on experience with encryption and decryption by building a Caesar wheel and skytale. Create your own encrypted message to share only with your BFF. Liji Gopalakrishnan & Sindhu Prasad. Rambus Inc.

2. Love at First Byte. Write a computer program in BASIC! Write a story with a MadLibs program. Debug (fix) an adventure game program. Play and modify other games on the computer. Adrienne Jardetzky.

3. Creating Your Own Virtual Reality World. Make your own VR world using simple commands then put on the VR headset and walk through it. Edward Loeswick. Bayside Academy M.S.


5. Graph Carnival. Using the motion figure, graph between time and distance with a computer using DESMOS. Younga Choi. Skyline College Mathematics.

6. Music and Technology. Learn how to make music! We’ll be demo-ing a computer programming language specifically for music and giving an introduction on how to record yourself and make music using available software. Elena Georgieva. Stanford University Dept. of Music.

7. www.code (Women Who Write Code). Learn programming to design art and build your own website alongside women from top tech universities and companies. No experience necessary! Jenny Vo-Phamhi & Elizabeth Vo-Phamhi.


9. C.S.I. San Bruno: Murder in the produce aisle. Interview and fingerprint the suspect, then analyze DNA to solve the crime. Alessandro Mazzora. Skyline College Phi Theta Kappa.

10. Succulent Nursery. Learn the proper way to plant succulents and take your plant home. Francis Manansala, Michael Sanchez, Molly Wong, Adele Wu, Jacob Harding, & Megan Chan, Skyline College Environmental Club.

11. Streams, Salmon, and Sharks, Oh my! Connect how salmon go from eggs to sharks—or to our dinner plates. Journey with the salmon from our local watershed, through the San Francisco Bay and beyond. Mayra T. Rivas & Lindsay Shorter. Aquarium of the Bay.

12. The Bizarre Business of Bioluminescence. In this workshop, we will explore how bioluminescence (emission of light by living organisms) has evolved and how organisms use it to hide, communicate, find food, and defend themselves. We’ll also get to see bioluminescence in action in some hands-on activities with living organisms! Veronica Pagowski, Stanford University.

HEALTH SCIENCES

13. Scrub in for Surgery. Come see the world behind the Double Doors of Surgery. Learn how to dress up like a surgeon. Step inside an operating room where a surgical procedure is about to start. Learn how you can become a member of the Surgical Team in only one year! Alice Erskine, Mary McKay, Monica Franciosa, & Virginia Plume. Skyline College.


15. The Heart: How does it work? Dissect a heart showing its parts and how these intricate parts work together to pump blood. Yancy Aquino. Skyline College Biology.

16. Sports Medicine: From the field to the operating room. Learn about the field of sports medicine and participate in hands-on activities related to the profession. Lindsay Donnelly, Lauren Bosshardt, Katie Susskind-Rioso, & Amanda Brown. Stanford University.


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27. Sustainable Architecture. Construct model houses from recycled material using alternative energy while learning about green building materials and investigating the Earth’s climate and water cycle and the sun. Anasanie Fountain. Skyline College Engineering.


29. Between a Rock and a Hard Place. Did you ever pick up rocks as a kid and shove them in your pocket thinking they were valuable crystals? What if they really were? In this workshop, we’ll classify different types of rocks using a variety of tests to get a glimpse into the life of a geologist. Elizabeth Avila. Stanford University.

30. The Scientist in the Kitchen: Molecular Gastronomy. Explore the physical and chemical changes that occur while cooking. Participants will conduct the culinary process of spheronization: shaping liquids into spherical treats! Timothy Wong, Amanda Carrillo, & Peggy Wong. Skyline College Biology.

31. Light it Up! Come and learn from the electrician women of Local 617 of San Mateo County as they show you how to light up your life! Learn how to light up an LED light using a lemon. Keefh Khalil. Decker Electric.

LIFE SKILLS

32. Fierce STEM Femmes! Take a fun trip into the past and throughout history to learn about pioneering women in STEM and their contributions to our modern world. Alana Julia Utsumi. College of San Mateo.

33. Dream it, Be it! If you can dream it, you can be it! Overcome STEM career obstacles and learn to work collaboratively with mentors from Soroptimist International. Kelly Quinn, Sylvia Chu, Frances Luster, & Lennon Smith. Soroptimist International, North SMC.

34. Emotional Intelligence: The Other Kind Of Smart. Emotional Intelligence (EQ) is just as important as IQ! Explore what it means to recognize, understand, and manage your emotions, feelings, moods, and attitudes. If you master your own EQ, then you are better equipped to influence friends, family, and others. Tina L. Simms. Northern CA Joint Pole Assoc.
9. San Francisco ZooMobile: Shifting the Balance. Explore the largest threats to animals and their habitats nearby and abroad, along with what each of us can do, individually and together, to restore nature’s balance on our planet. Blair Bazdarich, Anna Stewart, & Leah Coburn. San Francisco Zoo & Gardens.


11. Marvelous Microbiology! Microbes are all around us! Enjoy exploring the different microbes used in food production, and learn about microbes found in the human body and its surroundings. We will make root beer, observe “little critters” under the microscope, and perform biochemical tests. Susan Ngoke Munn Wu, Jaimelynn Alvarez, Jennifer Huang, & Oladipo Toriola. Impossible Foods, Inc.

12. Human Trait Scavenger Hunt! Why don’t you like certain foods? Do your taste buds work differently than others? Come to our workshop to learn more about yourself. Jing Folsom. Skyline College Biology.

13. From Cell to Milk, From Milk to Cheese. Wonder where milk comes from? How does the amazing body of a mother nurture its young? What’s in the milk? How does milk turn into cheese? Come to this workshop and you will have the answers. You will learn about cells, proteins, and beyond! Sheil Kee & Vasudha Srivastava. Genentech.


15. Cooperate or Die: Evolutionary Questions at the Intersection of Biology, Math, and Psychology. Play evolutionary games as you learn about the big questions in understanding why humans evolved to work together. Katherine E. Carter & Emma Doctors. National Center for Science Education.


17. Ocean Warriors. Do you want to learn how to save our oceans? Come learn about what causes ocean acidification, how it impacts marine animals, and what you can do about it! Rachel Cunningham. Skyline College Geography.

27. Respiratory Care Practitioners Make Your Breathe. Hands on CPR training, performing spirometry, auscultate (breath sounds), proper handwashing technique, unhealthy lung display compared to a healthy lung, drawing and painting lungs. Estefany Martinez, Skyline College Respiratory Care.


30. Nanoscience: Small but Mighty! Learn how scientists and engineers make and see things at the nanoscale and understand why nano is so exciting! Angela Hwang. Stanford Nano Shared Facilities


32. Power your Phone with the Sun! Explore solar science through hands-on design and build a solar USB phone charger. Giselle Serafin. Strategic Energy Innovations.


34. Particle Detectives. Step into the shoes of a particle physicist and track down elementary particles. Emilie Hein. Skyline College Physics.

35. Scaling the Solar System. Take a walk through the solar system and build your own scale model using beads and string while learning about the planets. Rod A. Regado, Jr. Skyline College Astronomy Club.

36. Rapid Prototyping with LittleBits. Stop by and create your own invention using electronic building blocks! Madeeha Khan & Sarah Cheung, TeenTechSF.

37. Engineer a Gift Factory! Learn cool tips and tricks of system design and software engineering! We will design a gift factory (on paper) and improve it step by step. Brittany Arthur, Jennifer Sanchez, Fredrik Palm, & Madison Sanchez. Google.

38. An Introduction to Vi Hart: YouTube’s #1 “Recreational Mathematician.” We will follow Vi’s lead to fold hexaflexagons, construct scutoids, and take selfies in front of explorations of the Mandelbrot set. David Vittorion Hasson & Richard Hough. Skyline College Mathematics.

47. Teens’ Nutrition, Health, & Fitness. Learn positive healthy eating and physical activity habits that will stick with you for life! Laura Conrad & Grace Conrad. MyShapers, LLC.

48. A Day in the Life of a College Student. We’ll be talking about what the college experience is like and the amazing opportunities that you can be a part of. Tu Nguyen (UC Berkeley), Megan Scott (San Francisco State University), Ashley Yang (UC Berkeley), & Andrea Guevara-Castro (San Francisco State University).

49. College Life: Secrets, Facts, and Fun! Learn about life of college students. Explore the exciting things you can do in college and discover the secrets behind scholarships (free money), internships, research, free educational travels, and everything beyond a STEM degree. Be inspired. Get motivated. Join us and let’s get you started now! Janah May Oclaman, Sachin Sharma, Sweta Sharma, Amadeus Ibajia, Dalia Mudawar, Patricia Ruvalcaba-Gomez, & Izaiha Ornelas. University of California, Davis.

50. Finding Your Place in STEM. Hear how different programs and influences can change your ideal STEM career. Veronika Brown. California Academy of Sciences.