

14th
Annual

4.18.19

2018 Presidents Award:
**Jelani Alvarez, David Grant,
Chris McLaren**
"Dark Side of the Earth"

2018 Deans Award:
Brenda Valencia
"Mathematics and Surgery"

2018 Deans Award:
Taison Quinonez
"The Revolution of Hollywood"

2018 Mr. C and Dr. J Award
Xach Ortega
"Equation of Time"

SAN DIEGO
CITY COLLEGE

STUDENT PROJECT & RESEARCH SYMPOSIUM

www.sdcity.edu/symposium



14th Annual San Diego City College Student Project & Research Symposium

April 18th, 2019

Dear Students, Campus Colleagues and Community Friends:

It is my great pleasure to welcome students, faculty, staff and the community together to celebrate the San Diego City College Annual Student Project and Research Symposium. This “Celebration of Student Excellence” is a campus-wide event recognizing the outstanding achievements of our students and the dedication of our faculty to student success.

Each year the Symposium exceeds its success from the previous year in attendance and participation. For the fourth year, the Symposium is presented in conjunction with the College’s annual Community Open House Day. For 2019, 200+ students representing more than 40+ academic majors, showcase their best work through 80 poster presentations, numerous oral presentations, radio/TV excerpts, PowerPoint presentations, spoken word, performances, demonstrations, and Fine Art displays.

I welcome you to explore and learn more about our College mission and values and understand why our campus community is so proud of our students. Although we come from different places, we join together here at City College focused on one goal: student success. Collaborating together, the City College Symposium melds the extraordinary efforts of faculty mentors and hard-working students to create a body of research work with endless possibilities for advanced studies across many disciplines.

On behalf of our entire college, I commend the Symposium Committee, volunteers and staff for the planning and collective efforts in bringing this signature event to life for the campus and community to enjoy.

Sincerely,

A handwritten signature in black ink that reads "Ricky Shabazz". The script is fluid and cursive.

Ricky Shabazz, Ed.D.
President
San Diego City College
rshabazz@sdccd.edu

Dear City College Community and Guests:

It is with great pride that we welcome you to the 14th Annual City College Student Project and Research Symposium. Today you will tap deeply into the spirit of City College, and it is going to be a great experience for you. As a visitor, you will see, hear and feel the blossoming talents of many of our finest students, who have proudly brought their creative work to the AH/BT Quad to share with you - *their college family and community friends*. You will marvel at the discipline, dedication and hard work that have been invested in their projects. And you will be inspired by the enthusiasm and inventiveness that permeates every display and performance.

This Symposium will highlight a multitude of research questions, showcase inquiry, critical analyses and scholarship. What does the symposium represent to us at City College?

- First and foremost, a vibrant campus community actively engaged in the pursuit of knowledge, the research process, creativity and excellence.
- The breadth of experiences and opportunities available to students - whether they're in physical or life sciences, mathematical pursuits or creative and performing arts.
- The inclusivity and diversity of our community.
- Our college commitment to student learning realized.
- Respect and support of our student achievements.
- A realization that there are no boundaries on what individual students can either learn or become at City College.
- That there are no limits! This Symposium is but a first step for students as they continue their quest for knowledge and future achievement.

Today you will become an important player on our stage, in some ways as important as the presenters themselves! As proud as they may be about their work, you see, until today it has largely been unexpressed, unseen, unappreciated by others. And students, like any other performers, need to play to an audience. Indeed, it's you – *their audience*, who gets to spark the real fun today, and ignite the joy of sharing, and fan the flame of pride and self-confidence. So please, everyone, jump right in and bring your excitement and enjoyment for all of us to share. Make it a point to pause often among the displays, introduce yourself to a proud but nervous presenter or performer, ask them about their work or future plans, and sprinkle a handful of compliments as you pass. Your applause will last them a lifetime!

We invite you to help judge the presentations. At the information table are judging rubrics and ballots. The overall award will be given by President Shabazz. The Science award by Dean Randy Barnes, and the Fine Arts award by Dean Jeanie Tyler. Special Achievement awards are given by the organizing committee. Your help, even as a guest, will validate the selection process.

We're so glad you're here - *enjoy the Symposium!*

Symposium Organizing Committee:

Elvin Lantigua, Outreach Program Coordinator
Cesar Gumapas, Public Information Officer
Misael Camarena, Professor of Mathematics
Robert Sly, Professor of Communications
Erin Engstrom, Professor of Communication

George Jessup, Professor of Mathematics
Deanna Shelton, Professor of Communication
Carol Withers, Professor and
City College Librarian
Patricia Fernandez, Supervisor Duplicating

Disclaimer: *The goal of the Symposium Organizing Committee is to celebrate student excellence and promote undergraduate research awareness and interest among students, faculty, staff and administrators. The student presentations are designed to benefit the academic, intellectual and cultural development of the City College community. The Symposium presentations do not necessarily reflect the views of City College, the San Diego Community College District or the campus community that supports the educational achievement of students.*



San Diego City College was honored to be selected in 2008 by the national Council on Undergraduate Research (CUR) to participate in its *Program on Institutionalizing Undergraduate Research* – a program sponsored by the National Science Foundation. Participation in the CUR program has enabled City College to build upon existing research activities – including this Symposium and broaden the institutional culture of research. One of only 64 schools selected nationally, City College was the only community college participating from the West Region.

With mentoring from CUR, a campus-based Undergraduate Research Collaborative (URC) was created to promote undergraduate research awareness and interest among students, faculty and administrators. At City College, undergraduate research is defined as an inquiry or an investigation conducted by a student in collaboration with a faculty mentor. Undergraduate research provides

opportunity for the intellectual growth of students via exploration and application of existing knowledge that may also lead to an intellectual or creative contribution to the discipline. City College is poised to increase opportunities for engagement in regional and national discussions of trends in higher education and new research directions, including partnering with other institutions and pursuing external funding. The ultimate goal is to have City College be the community college model for undergraduate research.

Our thanks and appreciation to our faculty mentors for supporting students in the pursuit of excellence.

Anthropology	Arnie Schoenberg	Health & Exercise Science	
Chicano Studies	Monica Hernandez		Alan Rivera
Communications	Erin Engstrom		Ellen Turkel
	Deanna Shelton	Mathematics	Roberto Rubalcaba
Cosmetology	Sudabeth Phillips		Misael Camarena
English	Aileen Gum		George Jessup
	Patricia McGhee	Political Science	Nicholas Boushee
	Jennifer Boots	Price Scholarship/ Mental Health	Leslie Easton
	Christy Ball	Psychology	Kim Sweeney
	Nicole Vargas		Penelope Mercer
	Kevin Gossett	Puente/ Counseling	Luis Perez
Business	Nancy Fredericks	Radio/TV	Laura Castañeda
	Leroy Brady		Cy Kuckenbaker
	Tania Serhan		Bob Sly
Biology	Heather Heinz		David Gauss
Chemistry	Robert Kojima	Sociology	Tim Gross
Fine Art	Terri Hughes-Oelrich		Sarah Pitcher
	Wayne Hulin		



Our Poster Presenters



1. **The Math behind Egypt**

Alejandro Alvarez

Karen Trujillo

Gustavo Cortes

Mentor: Misael Camarena - Mathematics

Major: **Music**

Major: **Food and Nutrition**

Major: **Teaching**

2. **The Distribution of Cocoa Beans in the U.S. and Europe**

Geary Aubert

Diamond Dawson

Mentor: Misael Camarena - Mathematics

Major: **Graphic Design**

Major: **Anthropology**

3. **Drag Force and Terminal Velocity**

Ramon Sanchez

Francisco Lopez

Shichuan Sun

Mentor: Misael Camarena - Mathematics

Major: **Mechanical Engineer**

Major: **Civil Engineer**

Major: **Economics**

4. **A Fresh Look at Old Bones**

Crystal Maison

Mentor: G. Timothy Gross - Anthropology

Major: **Anthropology**

5. **Quadratic Formula**

Khatereh

Mentor: Misael Camarena - Mathematics

Major: Undecided



6. **Good Prana**

Scarlett Elizaga

Samuel Samson

Mentor: Roberto Rubalcaba - Mathematics

Major: Nursing

Major: Nursing

7. **Rene Descartes**

Tim Truong

Stephanie Rios

Mentor: Misael Camarena - Mathematics

Major: Kinesiology

Major: Business

8. **Space X**

Aaron Pachito

Hassan Alamar

Mentor: Misael Camarena - Mathematics

Major: Undecided

Major: Health

9. **Multi-Factor Authentication**
Corey Jameson Major: **Mechanical engineering**
Mentor: Roberto Rubalcaba - Mathematics

10. **Rock Solid Calculations: How math has allowed us to reach new heights**
Roberto a Castillo Major: **Neuroscience**
Zachary Romance Major: **Civil Engineering**
Adolfo Partida Lizarraga Major: **Physics**
Mentor: Misael Camarena - Mathematics

11. **Pythagoras and the Pythagorean theorem**
Giovani Gonzalez Arrizon Major: **Civil Engineering**
Joel Castro Major: **Computer Science**
Mentor: Misael Camarena - Mathematics

12. **Caloric Balance by Counting Steps**
Vasylyna Sas Major: **Linguistics**
Mentor: Misael Camarena - Mathematics

13. **The Giraffe rate of extinction**
Elrick M Major: **Engineering**
Mentor: Misael Camarena - Mathematics

14. **Wireless power transfer**
Adriana Rojas Aguas Major: **Undeclared**
Mentor: Misael Camarena - Mathematics

15. **The Relationship Between the Greenhouse Effect and the Cattle Industry**
Raul Abraham Chairez Guzman Major: **Mechanical Engineering**
Jocelyn Licon Major: **Art History**
Mentor: Misael Camarena - Mathematics

16. **Walking On Broken Glass; Ingredients, Infants, and Isotopes**
Mandie Carter Major: **Anthropology**
Mentor: G. Timothy Gross - Anthropology

17. **Pyramids: The Foundation of Knowledge**
Ana Vasquez Major: **Health Science**
Juan Candelario Major: **Architecture**
Mentor: Misael Camarena - Mathematics

18. **Coffee Production and Deforestation**
Sarahi Primero Major: **Chemistry**
Jennifer R. Quintana Arvizu Major: **Landscape Architecture**
Valeria Guzman Major: **Nursing**
Mentor: Misael Camarena - Mathematics

19. **The Math behind Dance**
Erika Ortiz Gutierrez Major: **Child Development**
Alexis Navarrete Major: **Dance**
Mentor: George Jessup - Mathematics

20. **Constructing a Trajectory Equation for a Badminton Birdie in Flight**
Denzel Galamgam Major: **Biochemistry**
Mentor: George Jessup - Mathematics

21. **Math in Every-day Life**
Emanuel Hylton Major: **Undeclared**
Mentor: Nicholas Boushee- Political Science

22. Project Shawn Hinkston, Eddie Meza Jr, Bao Nguyen <i>Mentor: George Jessup - Mathematics</i>	Major: Electrical Engineering, Computer Science, ?
23. What you need to know about Accounting Evelin Matus <i>Mentor: Misael Camarena - Mathematics</i>	Major: Small Business Accounting
24. Serious brain damage is associated with football Alondra Mosqueda, Armando Macias, Jennifer Cortez <i>Mentor: Misael Camarena - Mathematics</i>	Major: Undeclared
25. "Skating Measures" Victoria Dominguez, Branden Reynolds <i>Mentor: Roberto Rubalcaba – Mathematics</i>	Major: Undeclared
26. "Inequality Doesn't Pay" Aya Kawkab, Juan Ahumada <i>Mentor: Roberto Rubalcaba – Mathematics</i>	Major: Undeclared
27. "Rogue Waves" Egor Polyakov <i>Mentor: Roberto Rubalcaba – Mathematics</i>	Major: Undeclared
28. "Gay Teen Suicide in the U.S." Adan Provencio and Jorge Mouet <i>Mentor: Roberto Rubalcaba – Mathematics</i>	Major: Undeclared
29. "What Does Real and Genuine Support Look Like?" Bethany Brzezinski <i>Mentor: Roberto Rubalcaba – Mathematics</i>	Major: Undeclared
30. "Boeing 737 Max Crash Analysis" Carlos Ordonez, Rolando Leon, and Adam Robinson <i>Mentor: Roberto Rubalcaba – Mathematics</i>	Major: Undeclared
31. "Optimizing Public Transport Routes" Angel Hernandez-Llamas <i>Mentor: Roberto Rubalcaba – Mathematics</i>	Major: Undeclared
32. "Stopping Pollution is the Best Solution" Luis Carmona, Unsa Fatima, Naomi Webb <i>Mentor: Roberto Rubalcaba – Mathematics</i>	Major: Undeclared
33. "Triple Town Sequences" Casandra Covill, Kathryn Shafer, Dylan Morse <i>Mentor: Roberto Rubalcaba – Mathematics</i>	Major: Undeclared
34. "UMOJA Math" Mindy Truong, Paris Wells <i>Mentor: Roberto Rubalcaba – Mathematics</i>	Major: Undeclared

COMMUNICATION SHOWCASE

2019 Student Project and Research Symposium

~ Thursday, April 18 ~ 9:35am-11:00am ~ AH306 ~



SPEECH PRESENTATIONS:

Briley McVey-Geo Metro (COMS)

Mentor: Erin Engstrom

Adrian Contreras-The Great Mayan Civilization (COMS)

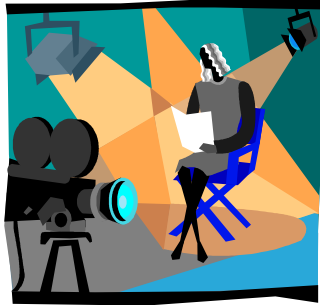
Mentor: Erin Engstrom

Joaquin Ruiz-Astroturfing (COMS)

Mentor: Erin Engstrom

Ruwayda Abdi-Addressing Islamophobia (COMS)

Mentor: Maria Jose Zeledon-Perez



SHORT FICTION FILM:

Jillian Trelease-L'Appel Du Vide (RTVF)

Mentor: Cy Kuckenbaker

DOCUMENTARY SHORT FILM:

Samantha King-Kate Goodson, Window Stories (RTVF)

Mentor: Cy Kuckenbaker

VIDEO PRODUCTIONS:

Isiah Jones-Flava Apparel: Pop Up Shop Recap (RTVF)

Mentor: Bob Sly

Beth McKee-A Pile of Experiences (RTVF)

Mentor: Bob Sly



CITY TIMES:

Jonny Rico/Jen Souza-Mid-Term Election Coverage (DJRN)

Mentor: Nicole Vargas

David Ahumada/Diangela Veras-The Legend Magazine (DJRN)

Mentor: Nicole Vargas

NEWS PACKAGES:

Jesus Lopez/Edgar Yudkevich/Yakira Delgadillo –Newscene (RTVF)

Mentors: Nicole Vargas and Chris Acedo



Oral PowerPoint Presentations

11:10 – 12:15 pm AH306

Alec Leman A Coup from the Shadow

Mentor: Nicholas Boushee

Falone Lubamba The Historical Context of Patriarchy in American Politics

Mentor: Nicholas Boushee

Alonzo Harvey Challenging the Constitutionality of Gang Documentation

Mentor: Nicholas Boushee

Sahara Estrada Bussing Funding in San Diego Unified School District

Mentor: Nicholas Boushee

“Questions & Answers” with Presenters (*time permitting*)



Spoken Word

12:00 AH/BT Quad

Ricky Shabazz – Special

Erik Ludwig – Loving

Max Hammerstrom – Bromates

Celine Bastidas - Exes duo

George Jessup – Marta's Story





Our OUTREACH team!



Cosmetology

10 am AH/BT Quad



Mentor: Professor Sudabeth Phillips – Cosmetology

Bootcamp/Martial Arts Circuit

AH/BT Quad 9:10-10am

Warmup
Dynamic Stretching
Main Circuit
3 Stations
Upper Body Exercise
Lower Body Exercise
Kick Boxing MMA Drills
Cool Down

Mentor: Professor Alan Rivera - Health and Exercise Science



Invited Universities 10 a.m. – 1 p.m. @ AH/BT Quad

Alliant	Phoenix
Argosy	Point Loma
Azusa Pacific	Redlands
Brandman	San Diego Christian
Columbia College	United States University
DeVry	Webster
FIDM	Woodbury
Embry Riddle	Pacific College of Oriental
St. Katherine	Medicine
Embry Riddle	Newschool of Arc
John Paul the Great Univ.	SIU Carbondale
National	

We wish to again thank all of the contributors to this event. We salute you! This program may not include some late additions and performances - unconfirmed at press time. We encourage you to stroll the grounds and seek out these fine later additions - and welcome them aboard!



CITY COLLEGE • MESA COLLEGE • MIRAMAR COLLEGE • CONTINUING EDUCATION



The Symposium Organizing Committee would like to acknowledge the essential contributions made by students, faculty, staff and administrators to ensure the quality and success of the Symposium. We are grateful for everyone's support and participation.

A special thank you to: Dr. Ricky Shabazz - President of City College; Matilda Chavez – Vice President; Deans Jeanie Tyler and Randall A. Barnes – co-sponsors of this event; City College MESA Program; the Academic Senate as co-sponsor of the Symposium; Associated Student Government; Transfer and Career Center; Patricia Fernandez Digital Print Production; Jay Purnell and the Facilities Services Department; Sean Ryan, Eric Sandoval and the Multimedia Department; Genevieve Esguerra and Elvin Lantigua Outreach Office; Nancy Wichmann Business Services Department; Kimberly La Rue and Cesar Gumapas from the Public Information Office.

We are also grateful for the support and guidance of the Institutional Assessment Committee in our collective efforts to both demonstrate and improve student learning.



SAN DIEGO CITY COLLEGE

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Ricky Shabazz, Ed.D.
President

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BOARD OF TRUSTEES: Craig Milgrim, Mary Graham, and (front row) Sean Elo, J.D., Maria Nieto Senour, Ph.D., Bernie Rhinerson.



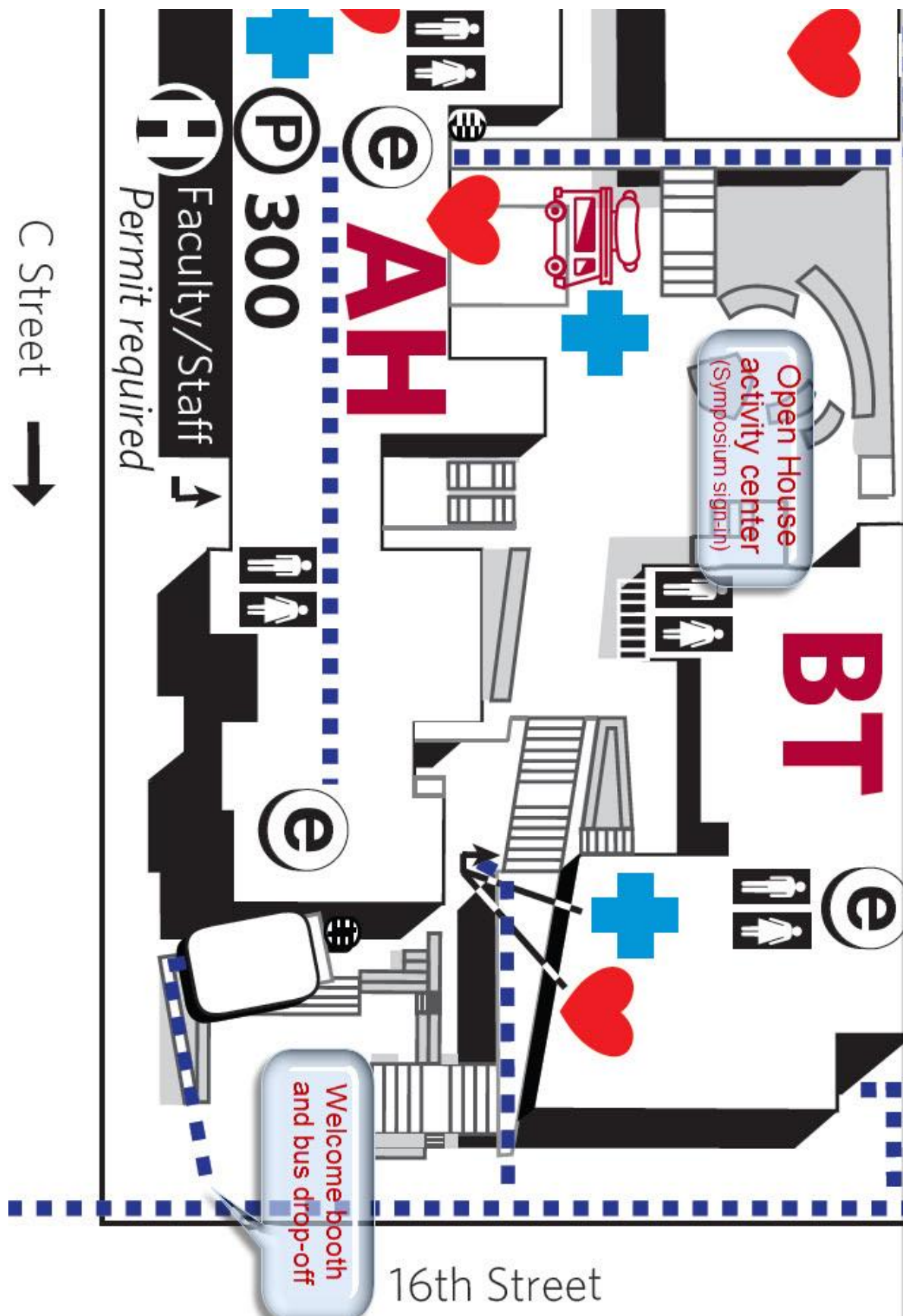
Judge name: _____ Presenter name: _____

Presentation Rubric for Symposium Events

Team (or individual) presentations are evaluated on a variety of aspects of the presentation including content, style, graphics, and teamwork. As a judge, you must commit to observing the entire event. It is suggested that you take notes on those that interest you and use those notes to fill in the Rubric below. Just check the appropriate boxes; the organizing committee will total the points and announce our winners.

Presentation Component	Unacceptable 0 Points	Acceptable 1 Point	Good 2 Points	Excellent 3 Points
Overview: introduction of presenter(s), case or problem and background described, agenda described	no introduction or overview, background or agenda	introduction of presenter(s) but awkward, sketchy or unclear overview/agenda and background	confident and fluent introduction; clear overview/agenda and background, but could be more complete or polished	confident introduction of roles and contribution; clear purpose, overview, and agenda; relevant & clear background
Style: use effective verbal and nonverbal communication skills (e.g., voice volume, inflection, eye contact, etc.)	poor style (long pauses, reading speech, "Umm..." and other mannerisms, poor eye contact, monotone, etc.)	either fluent delivery but reading, or awkward delivery but spontaneous	generally good delivery and spontaneity but could improve	excellent style involving matching verbal and nonverbal style, good projection with inflection, spontaneous speaking
Vocabulary: appropriate and fluent use of terms and concepts	little or no attempt to include terms, concepts, authors	use of terms but not well related, sporadic, misused or mispronounced	good use of terms but still uses jargon or forces or is awkward with use of terms	fluent vocabulary and pronunciation without pretensions
Application: appropriate and insightful application of procedures and practices	little or no inclusion of techniques, application, or practices	inaccurate or incomplete use of techniques	generally good application, but lack polish, fluency, or originality	strong application with good fit, rationale, fluency, and originality
Coverage: thorough and balanced in treatment of topic	very incomplete, significant gaps, or biased treatment of topic	either thorough but biased, or incomplete and balanced	generally thorough and balanced but awkward, needs more evidence, or better sequencing	thorough coverage of topic per assignment with balanced treatment of perspectives
Rationale: explains reasoning and provides evidence	little or no reasoning, explanation, or evidence provided	reasoning and evidence presented but not well organized or poor sources	good logical reasoning and evidence, but not integrated	logical reasoning integrated with authoritative references on key points
Graphics: attractive & balanced layout, legible font	no graphics (may be appropriate in some cases)	graphics present but poor quality (illegible, inconsistent, etc.)	well done graphics but too much or too little, and not on key points	well-designed and attractive graphics that simplify or summarize key ideas; original graphics
Team Roles: team members have equivalent roles (this part is excluded in individual presentations)	unclear team roles	clear team roles but unequal contribution	clear roles, equal contribution	clear roles, balanced contribution, good transition between presenters, cross reference each other
Discussion: team (individual) is prepared to facilitate discussion and is receptive to feedback	little or no discussion	discussion but without clear organization or purpose	prepared discussion questions	prepared questions on key areas, and responsive to and elicit participant reaction and questions
Reflection: team (individual) can identify what they would do differently to improve	little or no reflection	ask for feedback; some defensiveness	ask for feedback and clarify responses; generally non-defensive	request feedback, clarify responses and link to performance changes; positive & curious

Total _____



Schedule for April 18th, 2019

Student Project and Research Symposium

Poster Presentations @ AH/BT Upper Quad

> 9 a.m. – 1 p.m.



Oral Presentations @ Speech Lab (Room AH306)

> 9:35 – 11:00 a.m. • **Communication Showcase: Radio, Television and Speech**

> 11:00 a.m. – 12:00 p.m. • **Communication Showcase: Oral PowerPoints**



Performances @ AH/BT Upper Quad (East Side)

> 9 a.m. **Jazz - Provided by KSDS - also offering studio tours!**

> 9:30 a.m. **Martial Arts**

> 11 a.m. **Cosmetology**

> 12:00 p.m. **Spoken Word**



ELAC an ESOL Community Jennifer Boots

> 9 a.m. – 1 p.m.

Study Abroad – Costa Rica Christy Ball


Strategic-Activator-Positivity-Achiever-Communication

> 11:00 a.m. – 1 p.m.



Lunch for Participants @ AH/BT Upper Quad (West side)

> 12:30-1:30 p.m.



Awards Ceremony @ AH/BT Upper Quad (East side)

> 1:30 p.m.