### A. HIGHLIGHTS

Describe the School’s accomplishments for the past fiscal year.

The national call to spur innovation by strengthening the STEM talent pool is being heard loud and clear by the School of Science & Technology (SST) along with the call to address the changing healthcare landscape. SST is committed to student success defined most broadly as attracting, retaining, and graduating well-prepared students in SST disciplines. This commitment translates into initiatives encompassing teaching excellence and curriculum innovation, impactful student experiences, strong SST student communities, and a vibrant research environment. This summary of accomplishments provides insight into the many efforts taken across all departments in Science & Technology in 2016-17 to meet this vision and mission.

- Science & Technology faculty and staff provided over 2170 FTES (annualized full time equivalent students) of instruction across biology, chemistry, computer science, engineering, geology, kinesiology, mathematics & statistics, nursing and physics & astronomy disciplines. This includes lecture, laboratory, field, clinical, online and other instructional settings as well as courses for general education, major and supporting requirements, and electives.
- New facilities supporting student learning and exploration were advanced this year:
  - SSU Innovation Lab – this collaborative space in the SSU Library is the result of Jeremy Qualls’ (Physics & Astronomy) leadership including the development of the general education course *SCI 220: Dream, Make and Innovate* and $580K+ National Science Foundation Improving Undergraduate STEM Education (IUSE) funding to establish a cutting-edge innovation space. Future plans are to expand the effort campuswide as the Innovation @ SSU Initiative. KRCB coverage at [http://radio.krcb.org/post/sonoma-state-opens-new-makerspace-dreamers-and-thinkers#stream/0](http://radio.krcb.org/post/sonoma-state-opens-new-makerspace-dreamers-and-thinkers#stream/0).
  - New on-campus SSU Observatory building – the original 41-year old structure was replaced with a state-of-the-art split roof observatory this spring. Telescopes are being refurbished and will be moved back to the new building in preparation for a Grand Opening in early September.
  - New Computer Science Department instructional and research laboratory opened on the first floor of Stevenson Hall in Fall 2016.
  - New Chemistry instructional lab opened in Carson Hall 10 this year providing expanded access to students.
- The 2017 School of Science and Technology Commencement Ceremony on Saturday, May 20, was the first ever school-based commencement event. Held in Weill Hall at the Green Music Center, over 60 SST faculty were in the platform party (of nearly 80) and were there to celebrate the 367 participating graduates (~74% of those eligible). Everyone in the SST community provided input to the planning process. All elements were discussed and decided on by the SST Commencement Planning Group (consisting of AS SST Representative Ashley Dates, Council of Chairs, and Senate Planning Lead, Tom Targett). New application and selection procedures were implemented for selecting the School’s student speaker.
- Science & Technology faculty are outstanding teachers as evidenced by Student Evaluation of Teaching Effectiveness aggregate scores that report SST faculty are rated as “Very Effective”
across all evaluation criteria. With more than 6755 student responses (Fall 2016) and on a 5 point scale, SST faculty averaged scores well above 4.0 (very effective) and amongst the highest rated were: “displayed competence in course topics” (4.54/5.0), “displayed enthusiasm for teaching the course” (4.5/5.0), “respects different points of view” (4.39/5.0) and “my instructor provides opportunities to question ideas in class” (4.38/5.0).

- Science & Technology faculty published over 75 scholarly works and gave over 60 professional presentations.
- Science & Technology faculty continue as leaders in their fields as evidenced be the following standout achievements:
  - Lynn Cominsky (Physics & Astronomy) was elected a Fellow by the California Academy of Sciences (May 2017). This reflects Dr. Cominsky’s distinguished contributions to the sciences – particularly in the field of Astronomy. She joins SSU Academy Fellows Matt James (Geology) and Dan Crocker (Biology). Dr. Cominsky was also the recipient of 2017 Malina Astronautics Medal.
  - The 2017 President’s Award for Excellence in Scholarship was awarded to Dan Crocker (Biology). In 2016 the Award was presented to Lynn Cominsky (Physics & Astronomy) and Suzanne Rivoire (Computer Science).
- The Mathematics & Statistics Department is reforming the developmental math curriculum to better serve underprepared students. With funding from the graduation initiative (GI2025), the department is developing the curriculum and will run pilot sections for four new stretch courses in 2017-18. The plan is to replace all remedial math courses with 4 types of GE stretch courses.
  - Math 131A/B Finite Math for Business
  - Math 150A/B Transformational Geometry
  - Math 161A/B Functions and Rates of Change
  - Math 165A/B Data Visualization and Analysis

The two-semester sequences will allow students to satisfy their remedial math requirement and their GE B4 requirement simultaneously, with all 6-8-units in the sequence (3-4 units per semester) counting towards the 120 unit requirement for graduation. In some cases this will shorten students’ time to graduation. An added benefit is that students will not experience the stigma of being placed in a remedial mathematics class (and the attendant stereotype threat that further depresses performance).

- Nursing pre-licensure program received accreditation from the California Board of Registered Nursing (BRN).
- Science and Technology continues to actively seek funding from external and internal funding sources to further our vision and mission. Science & Tech Principal Investigators have 33 active sponsored projects totaling nearly $15M in external state and federal funding.

B. SUMMARY OF ACCOMPLISHMENTS

What is the single most important accomplishment of the School of Science & Technology this year?

The single most important accomplishment of the School of Science & Technology in 2016-17 was the 5th Annual SSU Science Symposium – a culminating experience rooted in the School’s teacher-scholar faculty model. The Symposium was held on May 3, 2017 as part of the campus wide SSU Symposium on Research and Creativity. The Symposium featured a poster session showcasing the scholarship and achievements of students in the School of Science and Technology as well as collaborations across disciplines and with community partners as part of the WATERS Collaborative. Over 135 posters representing the work of over 300 student contributors were included. This represents significant growth compared to last year. Judges selected awardees for: 1) Dean’s Graduate Research Award in Nursing, 2) Dean’s Graduate Award in Biology, 3) Science Symposium
Bright Idea Award, 4) Science Symposium Big Picture Award, and 5) Science & Technology Symposium Award. See the program and poster abstracts at: http://www.sonoma.edu/scitech/symposium/Science%20Symposium%20Program%202017_website.pdf

C. PUBLICATIONS

1. Biology


2. Chemistry

a. Sanner, Michele M., Neagu, Julian A., Farmer, Steven C. Petroleum Chemistry in Organic Chemistry Textbooks and its Possible Connection to Public Knowledge, World Journal of
Chemical Education, 2016, 4 (4), 73-75.


e. Four chemistry faculty (**Lares, Negru, Su**, and **Works**) presented collaborative undergraduate research at the American Chemical Society (ACS) Conference, San Francisco, April 2017. Abstracts are published as conference proceedings.

### 3. Computer Science


### 4. Geology


### 5. Kinesiology

a. **Kurt Sollanek, Bulent Sokmen**, and Scott Talpey (2017) The Effects of Acute Bilateral and


### 6. Mathematics & Statistics


b. **Martha Byrne**, Using Games to Engage Students in Inquiry, PRIMUS, 27(2), 271-280.


### 7. Nursing


### 8. Physics & Astronomy

a. GW150914: First results from the search for binary black hole coalescence with Advanced LIGO. Abbott, B. P. and 981 co-authors including **L. Cominsky**, Physical Review D, Volume 93, Issue 12, id.122003 (6/2016)

b. Observing gravitational-wave transient GW150914 with minimal assumptions. Abbott, B. P. and 969 co-authors including **L. Cominsky**, Physical Review D, Volume 93, Issue 12, id.122004 (6/2016)


d. High-energy neutrino follow-up search of gravitational wave event GW150914 with ANTARES and IceCube. Adrián-Martínez, S. and 1400 co-authors including **L. Cominsky**, Physical Review D, Volume 93, Issue 12, id.122010 (6/2016)


m. First targeted search for gravitational-wave bursts from core-collapse supernovae in data of first-generation laser interferometer detectors. Abbott, B. P. and 968 co-authors including L. Cominsky, Physical Review D, Volume 94, Issue 10, id.102001 (11/2016)

n. Results of the deepest all-sky survey for continuous gravitational waves on LIGO S6 data running on the Einstein@Home volunteer distributed computing project. Abbott, B. P. and 957 co-authors including L. Cominsky, Physical Review D, Volume 94, Issue 10, id.102002 (11/2016)


r. Exploring the sensitivity of next generation gravitational wave detectors. Abbott, B. P. and 722 co-authors including L. Cominsky, Classical and Quantum Gravity, Volume 34, Issue 4, article id. 044001 (2/2017)

s. All-sky search for short gravitational-wave bursts in the first Advanced LIGO run. Exploring the sensitivity of next generation gravitational wave detectors. Abbott, B. P. and 987 co-authors including L. Cominsky, Physical Review D, Volume 95, Issue 4, id.042003 (2/2017)


u. Directional Limits on Persistent Gravitational Waves from Advanced LIGO’s First Observing Run. Abbott, B. P. and 997 co-authors including L. Cominsky, Physical Review Letters, Volume 118,
D. PRESENTATIONS

1. School level

a. The 5th Annual SSU Science Symposium was held on May 3, 2017 as part of the campus wide SSU Symposium on Research and Creativity. The Symposium featured a poster session showcasing the scholarship and achievements of students in the School of Science and Technology as well as collaborations across disciplines and with community partners as part of the WATERS Collaborative. Over 135 posters representing the work of over 300 student contributors were included. See the program and poster abstracts at: http://www.sonoma.edu/scitech/symposium/Science%20Symposium%20Program%202017_website.pdf


2. Biology


e. Rank, Nathan. Stockholm University plenary speaker at annual 'Bloodbath' event at Torvetorp research station, Stockholm University department of Zoology.


3. Chemistry


4. Computer Science

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b. **Ravikumar, B.** "Language Approximations – Asymptotic and Non-asymptotic Results." Invited speaker, Developments in Language Theory, Liege, Belgium, August 6-11, 2017.

## 5. Geology


h. **Anfinson, O.A.,** Presenter and Panel Member- Sonoma County Meeting on Winter 2017 Flooding of Copland Creek (2017)

i. **Anfinson, O.A.,** Presenter- Geological Perspectives on Flooding in Copland Creek, Lichau and Roberts Rd Residents, Cotati Fire Department, Rohnert Park, CA (2017)

j. **Anfinson, O.A.,** Presenter- Humboldt State University, Geology Department (2016)

k. **Anfinson, O.A.,** Presenter- Fountaingrove District AVA Designation Event: Geology, Soils, and Wine of Sonoma County and the Fountain Grove District AVA (2016)

l. **Anfinson, O.A.,** Presenter- Sonoma State University Fall Convocation (2016)

m. **James, MJ:** Hour-long presentations given:
   i. March 30 - Museums of Sonoma County, Santa Rosa
   ii. April 5 - Smithsonian Institution, National Museum of Natural History
   iii. April 6 - Embassy of Ecuador, Washington, DC
   iv. April 11 - Florida Gulf Coast University, Fort Meyers, Florida
   v. April 12 - Naples Botanical Garden, Naples, Florida
   vi. April 20 - Council of American Maritime Museums, San Francisco
   vii. April 26 - California Academy of Sciences, San Francisco
xi. May 22 - Christ's College, Cambridge University, England
xii. May 24 - King's College, London, England
xiii. June 7 - Monterey Bay Aquarium Research Institute, Moss Landing
xiv. June 16 - Bodega Marine Laboratory, Bodega Bay (sabbatical research)
xv. June 20 - American Association for the Advancement of Science, Pacific Division, Presidential Address, Kamuela, Hawaii
xvi. June 28 - Northern California Geological Society, Orinda
xvii. July 19 - Bodega Marine Laboratory, Bodega Bay (book)


6. **Kinesiology**
b. **Blanquie, S.** Sonoma County athletic trainer's Association, 2016.
d. **Carlton, E.** "'But you're a guy? Is that allowed?' Male practice players in women’s college basketball," 2016 International Society for the History of Physical Education and Sport Congress.
e. **Carlton, E.** "Exploring Gender And LGBTQ Equity In Local Elementary Schools: Aspiring To Create Safe And Welcoming Spaces For All Children In The Current Political Climate," Sonoma State Invistiture Community Conference.
f. **Bulent Sokmen, Kurt Sollanek,** Scott Talpey. The Effects of Acute Bilateral and Unilateral Set Protocols on Muscle Power and Rate of Force Development.

7. **Mathematics & Statistics**
a. **Brown, G.:** Predicting the Quality of Bordeaux Wine, SSU Math Colloquium, Spring 2017
b. **Byrne, M.** "Surviving and Thriving in your First Course Using Active Learning Techniques," Joint Mathematics Meetings, Atlanta 2017, invited panel

c. **Byrne, M.** "Collaborative Curve Sketching: An Activity for Classes," Joint Mathematics Meetings, Atlanta 2017

d. **Byrne, M.** "Hyperbolic Geometry and the Art of M.C. Escher," Math and Stats Department Colloquium, Spring 2017, invited

e. **Byrne, M.** "The Bizarre Worlds of Hyperbolic Geometry and M.C. Escher," Osher Lifelong Learning Institute Science Club, Spring 2017, invited

f. **Ford, B. and B. Lahme:** Making Math, SSU Math Colloquium, Spring 2017

g. **Ford, B. and B. Lahme:** Making Math Presentation and Lesson Study Commentator, CANME² (California Action Network for Mathematics Equity and Excellence) Conference, Santa Rosa, April 2017


i. **Kanaana, I.**: The Distinguishing Number and the Distinguishing Chromatic Number of Graphs, SSU Math Colloquium, Fall 2016

j. **Shott, M.** "Increasing and Retaining STEM Majors through an Integrated Freshman Year Experience." CSU Symposium on Teaching and Learning, October 2016.

k. **Shott, M.** "A Watershed Year: Modeling and Data Interpretation as Pathways to Building Mathematical Confidence in First-Year Students." Joint Mathematics Meetings of the MAA and AMS, January 2017.

l. **Shott, M.** "Profit or Pauper: It's All in the Roll of the Dice!" Piner High STEM Cafe, February 2017.

### 8. Nursing

a. **Kelly, M.** ST Joseph’s Health System- Quality Management- Care Transitions Program Data and Analysis

b. **Kelly, M.** SSU Students Put North-bay Hospital on the Map: Presented at SSU Presidential Investiture

c. **Kelly, M.** Preparing for Students to be Successful in Online Learning- Online Teaching and Learning Institute

d. **Kelly, M.** EES Recognition and Course Release for 2017-18

e. **Kindy, D.** 9/21/17: FYE Human Sexuality guest lecturer and post lecture facilitator

f. **Napoli, R.** Poster Presentation: Barriers to Skin to Skin Care from Maternal & Nurse Perspectives

g. **Ritter, B.** Provided EKG online module for FNP EKG seminar

h. **Rose, J.** Presented at the Online & Blended Teaching Institute at SSU, showing ways to use Camtasia and Snag It to support online learning. Will do a poster presentation on same topic at the SSU Investiture for Dr. Sakaki.

i. **Rose, J.** Using Technology to Support an Online Classroom

j. **Rose, J.** Texting Nutrition Education

k. **Rose, J.** De-stress Seminar for Wellness Residence Life at SSU

l. **Wilkosz, ME.** High School Counselor’s Conference at SSU - presented with Biology Department discuss options for health care professions


n. **Wolcott, K.** Online Teaching Workshop, Use of VoiceThread to create a space for engagement
9. Physics & Astronomy

a. Cominsky, L. Invited talks:
   i. Newport, RI (2016) Exploring Gravitational Waves in the Classroom, invited talk at the Gordon Research and Education Conference (June 6, 2016)
   ii. Santa Rosa, CA Learning by Making, invited talk at reMake Education conference (Aug 4, 2016)
   iii. Santa Rosa, CA Spacetime Symphony: Gravitational Waves from Merging Black Holes, invited talk to Sonoma County Amateur Astronomers (Sept 14, 2016)
   v. Rohnert Park, CA (2016) Science of War (and Peace), invited lecture in the War and Peace seminar series, Sonoma State University (Sept 27, 2016)

b. Cominsky, L. Conference contributions:

c. Qualls, J. "Grand Opening of SSU Makerspace with 3D Printing and Laser Cutter Workshop: Give
**E. NEW FUNDING AWARDED IN 2016-17**

1. **New Campus/School-based Funding Awards (Internal)**
   a. 2016-17 Faculty SOURCE awards to 13 faculty Bentley, Cohen, Cushman, Crocker, Lin (Biology), Shi (Physics & Astronomy), Anfinson (Geology), Negru, Perri, Su (Chemistry), Farahmand (ES), Sokmen, Sollanek (Kinesiology); 2016-17 Student SOURCE awards to 31 students working with Science & Tech faculty.
   b. KORET Awards were given to 11 faculty in Science & Technology (Biology (Cushman, Geist, Girman); Chemistry (Perri, Negru, Works); Engineering (Hamel-Bissell); Geology (Anfinson); Physics & Astronomy (Cominsky); Kinesiology (Morimoto, Sokmen); with 4 undergraduates.
   c. 2016 Summer RSCAP Fellowship awards to Dowdall (Math & Statistics), Place (Biology), Sharrett (Chemistry), and Targett (Physics & Astronomy)
   d. 2017 Summer RSCAP Fellowship awards to Gill (CS), Anfinson (Geology), Sollanek (Kinesiology), Farmer (Chemistry), and Zippay (Biology)
   e. 2016-17 RSCAP Mini-grants awarded to Lares (Chemistry), Farahmand (ES), and Cohen (Bio)
   f. 2017-18 RSCAP Mini-grants awarded to Carlton (Kinesiology), Farmer (Chemistry), and Zippay (Biology)
   g. Summer High School Internship Program (SHIP) 2016 – 10 faculty (Cominsky, Gill, Decker, Qualls, Lares, Perri, Roberts, Shi, Sokmen, Zippay) served as research mentors for the Sci & Tech SHIP ([http://www.sonoma.edu/scitech/hs/2016/](http://www.sonoma.edu/scitech/hs/2016/)); working with 19 Sonoma County young scientists.
   h. Sci & Tech Professional Development Committee awarded $45,000 of support to 40 different tenure track faculty.
   i. Dean's Summer 2016 Research Awards – 5 awards ($3,000 stipend each) to Sci & Tech faculty Anfinson (Geology), Gill (CS), Lares (Chemistry), Qualls and Shi (Physics & Astronomy); support for 5 summer student research assistant "Rising Stars."
   j. Dean's Summer 2017 Research Awards – 4 awards ($2,000 stipend each) to Sci & Tech faculty Cohen (Biology), Gill (CS), Negru (Chemistry) and Shi (Physics & Astronomy); support for 6 summer student research assistant "Rising Stars."
   k. Other internal awards:
      - 2016 Steve Norwich Awards: Bentley (Biology; Measuring ecosystem sensitivity to drought at the Obsorn Preserve as part of the global monitoring project, Drought-Net), Girman (Biology; two projects: 1) Effects of cattle grazing on grassland vertebrate communities on Sonoma Mountain, 2) Effects of water quality on mate choice in 3 species of newts), Hamel-Bissell (ES; A drone-mounted optical imaging system for hyperspectral analyses of Osborn Preserve habitats), Rank (Biology; Assessing the spread of Sudden Oak Death in the Copeland Creek watershed)
      - Spring 2017 WATERS Collaborative Awards – Cohen (Biology), Farahmand (ES), Girman
- Biology, Perri (Chemistry), Torok (Biology)
- Sustainability in the Classroom Grant, Anfinson (pending), GEOL 311 course redesign

## 2. New External Funding Awards

### a. School level

1. **Stauffer, L.** The Regents of the University of California/National Science Foundation: “Transforming College Teaching: Statewide Implementation of the Faculty Learning Program to Improve STEM Undergraduate Teaching and Learning,” $97,562.

### b. Biology

1. **Bentley, L.**
   a) 2017-2020 National Environment Research Council (NERC) Standard Grant, Understanding tree architecture, form, and function in the tropics £800,000 (co-PI; University of Oxford).
   b) Li-COR LEEF grant (to help purchase equipment)

2. **Rank, N.** Wenner-Gren Foundation, Sweden. Genes associated with thermal adaptation in a montane leaf beetle. $80,000

### c. Chemistry

1. **Farmer, S.** Received $50,000 from the California AB 798 College Textbook Affordability project. Collaboration with the SSU faculty center.
2. **Works, C.** RUI: Mechanistic Investigation of Photochemical Products from Iron-Iron Hydrogenase Model Compounds; Insight into the Catalytic Generation and Activation of Molecular Hydrogen. NSF funded, $180,000.
3. **Works, C.** Course Redesign with Technology, Supplemental Instruction in Chemistry, Chancellor's Office, CSU, $18,000.

### d. Geology

1. **Anfinson, O.**
   a) 2017 Pending- NSF Proposal: Co-PI, MRI: Acquisition of a Variable Pressure Scanning Electron Microscope with integrated EBSD, EDS, WDS, and CL. Lead PI-Matty Mookerjee (Sonoma State University) ($605,897).
   b) 2017 The Research Council of Norway- INTPART: Co-PI, Changes at the Top of the World through Volcanism and Plate Tectonics: Norwegian-Russian-North American Arctic research and education. Lead PI Carmen Gaina (University of Oslo) ($5,680,000 NOK ($669,000 USD))
   c) 2016 Arizona State University funding from NSF grant for student analytical support (4 students, $2400)

2. **Mookerjee, M.** While it has not been funded yet, in 2016 we were informed that our project: NSF-EarthCube-Capabilities: EarthCube Data Infrastructure: Collaborative Proposal: "A unified experimental-natural digital data system for cataloging and analysis of rock microstructures" was "being held" by NSF in hopes of finding funds potentially as a "pilot project."

### e. Math & Stats

1. Math Teachers' Circle Seed Grant, American Institute of Mathematics, $2000

### f. Nursing

1. **Kelly, M.** EES Recognition and Course Release for 2017-18
2. **Kelly, M.** Secured IRA funds for Nursing Simulation 8,000$/yr
3. **Wilkosz, ME.** CVS Health Foundation Scholarship Grant - $5000
### Physics & Astronomy

i. **Qualls, J. PI:** STEM Education Through Sophomore Innovation, L. Cominsky, Co-PI, $584,705, NSF Improving Undergraduate STEM Education (IUSE), 2016 – 2019.

ii. **Qualls, J. CO-PI:** CSU Maker Initiative $100,000 Chevron through CO

### CONTINUED FUNDING

#### 1. School level

a. **Stauffer, L.** The Regents of the University of California: “MESA Engineering Program MEP,” award extended until June 30, 2017; additional funding of $10,000 for a total of $30,000

#### 2. Biology

a. **Bentley, L.** 2015-2018 National Science Foundation Grant: Collaborative Research: Developing integrated trait-based scaling theory to predict community change and forest function in light of global change. $540,000 total (co-PI; $354K Univ. of Arizona/SSU).


c. **Rank, N.** 2015-18. NSF. Division of Integrated Organismal Systems. Physiological and genetic basis of responses to winter in a Sierra willow leaf beetle. Collaborative proposal with C. Williams of UC-Berkeley; coPIs J. Stillman (UC-Berkeley), N.E. Rank and E.P. Dahlhoff. $750,102 (total amount of award, most to Berkeley)


#### 3. Geology

a. **Mookerjee, M.** NSF-EAR-TECTONICS: Structural Geology and Tectonics Forum at Sonoma State University, Rohnert Park, CA. Funded: $16,517

#### 4. Kinesiology

a. **Sollanek, K.** Project title: Trials to assess the beverage hydration index of oral rehydration solutions. Funding agency: Entrinsic Health Solutions, LLC (Enterade®). Funding: Total costs $25,000. Details: Verbal agreement regarding the monetary value was sent from the company on February 10, 2016. Contract was signed between Company and SSU on December 22, 2016.

#### 5. Math & Stats

a. **Brannen, S.** LSAMP, NSF & CO, $40,000

b. The California Mathematics Project: North Coast, a collaboration between the Mathematics and Statistics Department, the SSU School of Education, and the Sonoma County Office of Education, continues to work with districts throughout the north coast region to provide teacher professional development in mathematics. 2016-17 grant activity includes regular annual Math Project funding of $50,000, plus a 3-year California Math-Science Partnership grant to the Santa Rosa City Schools for $1.8 million ($600,000 in 2016-17, including $277,000 to SSU, P.I. Ben Ford, Co-P.I. Brigitte Lahme, Content Development: Carol Keig).

#### 6. Nursing

a. **Wilkoz, ME.** Song Brown $185,000; Proposal co-authored by J. Rose.

b. **Wilkoz, ME.** Song Brown Special Projects $66,000

#### 7. Physics & Astronomy

a. June 2015, Fermi and Swift Communications and Outreach, NASA, L. Cominsky, Principal Investigator, $300,000 for 6/1/2015-5/31/2018

b. October 2015, Rising Data: Flight Project Curriculum for Community College Students, NASA
Minority University Research and Education Program Community College Curriculum Improvement, E. Quealy, Principal Investigator (Napa Valley College), L. Cominsky Co-investigator, $749,922 total for three years, including $268,645 to SSU.

c. January 2016, NASA’s Universe of Learning, NASA Science Mission Directorate Cooperative Agreement, D. Smith, Principal Investigator (Space Telescope Science Institute), L. Cominsky Co-investigator, $1,564,824 to SSU for five years.

d. April 2016, EdgeCube: A 1U Global Monitor for Earth’s Ecosystem, SMD and SpaceGrant, L. Cominsky Principal Investigator, $200,000 for two years.

e. Severson, S. "Building the Sonoma State University Physics Teacher Pipeline", PhysTEC Teacher Recruitment grant (PhysTEC $29,889). Program to increase the number of High School Physics Teachers, focused on recruitment effort.

G. PROFESSIONAL DEVELOPMENT ACTIVITIES

1. School level
   a. SSU Open Educational Summer Teaching Institute, May 23; 13 SST faculty participated.

2. Biology
   a. Bentley, L.:  
      i. Moodle QuickStart workshop (Fall 2016)
      ii. Faculty center STEM Faculty learning program (Spring 2017/Fall 2017)
      iii. Faculty center ACUE course (Fall 2016)
      iv. SSU Open Educational Resources Summer Teaching Institute
   b. Guilford, J. Participated in the ACUE Faculty Development Teaching Excellence training through the Faculty Center.
   c. Rank, N.:  
      i. Administers the Biological diversity outreach program for the Biology department.
      ii. Helped organize the Biology Alumni Gathering in April 2016

3. Chemistry
   a. Negru, B.:  
      i. OER Faculty Center Summer Institute
      ii. SSU STEM Faculty Learning Program (Spring 2017/Fall 2017)

4. Computer Science
   a. Gill, G. Certificate in Effective College Instruction by Association of College and University Educators (ACUE) online courses

5. Engineering Science
   b. Hamel-Bissell. ACUE, SSU STEM.

6. Geology
   a. Anfinson, O.:  
      i. Session Chair- American Geophysical Union National Conference, Emerging trends, novel applications, and applied studies in detrital geochronology, Session ID: 13132 (2016)
      ii. Participant- Structural Geology and Tectonics Forum, Sonoma State University (2016)
      iii. Participant- Circum Arctic Structural Evolution Conference, Hannover, Germany (2017)
   b. Mookerjee, M.:  
      i. Participated in a UNAVCO-sponsored workshop entitled: "Hooking undergraduates into geophysics data and methods through societally important issues," Dec 2016.
ii. Participant on the field trip "Active Tectonics of the North Coast" with leaders: Carol Prentice and Steve DeLong (USGS), Aug 2016.

iii. Participant in short course "Statistical Treatment of Structural Geology Data" with leaders: Josh Davis, Sarah Titus, and Basil Tikoff, Aug 2016.

7. Kinesiology

a. Blanquie, S. CANVAS workshop at SRJC, Moodle Workshop at SRJC, and CEU's from National Athletic Trainer's Association
b. Carlton, E. Completed course Mindful Educator Essentials through Mindful Schools
c. Sokmen, B.:
d. Sollanek, K.:
   i. Will be attending the 14th Annual International Society of Sports Nutrition (ISSN) Conference and Expo, June 22-24, 2017, Phoenix, AZ.
   ii. Attended the California Physical Therapy Association (CAPT) seminar "Bridging the Gap Between Function and Athletic Performance," Nov 5, 2016, Santa Rosa, CA.
   iii. Attended the Southwest Chapter of the American College of Sports Medicine Conference, October 21-22, 2016, Costa Mesa, CA.
   iv. Attended the CrossFit® Level 1 Certification Course, Oct 15-16, 2016, Stockton CA.
v. Participated in the Association of College and University Educators (ACUE) Course in Effective Teaching Practices, through the Faculty Center, Fall 2016.

8. Mathematics & Statistics

a. Fall 2016 and Spring 2017 Pedagogy Workshops, Math and Stats Department, SSU
c. Byrne, M.:
   i. Conference on calculus in the undergraduate curriculum with S. Tiwari, Minneapolis, June 2016
   ii. RUME with a View conference, include workshop on equity research, Fall 2016
   iii. ACUE faculty development program through SSU's faculty center, Fall 2016
   iv. Faculty Center Faculty Learning Program on Transforming STEM Teaching, Spring 2017
   v. Equity working group at annual RUME conference, Spring 2017
d. Dowdall, N.:
   i. Arts Integration Workshop, SSU, Fall 2016
   f. Lahme, B.:
   g. Shott, M. Participation in a Mini-Course on the "Modeling-First" approach to teaching differential equations at the MAA/AMS Joint Mathematics Meetings.

9. Nursing

a. Brunk, T. Attended pediatric conference in May
b. Kelly, M. Faculty Retreat Facilitator
c. Kelly, M. Facilitator, Retreat for Faculty Center Staff
d. Kindy, D.:
   i. 2/17: CSU: Preventing discrimination and Harassment
   ii. 2/16/17: Dr. Ross Greene; Understanding and Helping Kids with Social, Emotional and Behavioral Challenges
   iii. 1/20/17: Safe Zone Training
iv. 11/28/17: Vosaic Sim and role play

e. **Napoli, R.**
   i. Completed all requirements & Passed the International Board Certified Lactation Consultant (IBCLC) Exam
   ii. Received Certification from Association of Women’s Health & Neonatal Nurses as Certified Intermediate Fetal Monitor Instructor
   iii. Completed the National Student Nurses Association (NSNA) Leadership University Advisor Certificate Program.

f. **Rose, J.** California Association for Nurse Practitioners 40th Annual Conference

g. **Rose, J.** Practiced as a Family Nurse Practitioner at SSU Student Health Center

h. **Wolcott, K.:**
   i. Completed ACUE Teaching Strategies course through Faculty Center - Fall & Spring semester.
   ii. Attended Medical Cannabis day-long workshop on campus.
   iii. Attended Advising How-To for faculty to learn the ARR.
   iv. Attended “Safe Zone” LGBTQ Ally training
   v. Participated in Curriculum Revision Retreat for CNECM program

10. **Physics & Astronomy**

   a. **Qualls, J.** STEM California: Maker Conference (2016)
   c. **Severson, S.** 2017 Open Educational Resources Summer Institute

H. **TEACHING, SCHOLARSHIP, AND/OR SERVICE COLLABORATIONS**

1. **Biology**

   a. **Bentley, L.** Started/completed a research project in my lab with 7 undergrad students and one post-doc (Spring 2017).
   b. **Cohen, M.** Participating on an ad hoc committee to investigate introducing composting to SSU.
   c. **Guilford, J.** Took nine students to the Water Resource and Policy Initiates Conference in San Jose in April as part of the Water Research Internship. The Water Research Internship, offered through the CEI, involved mentoring students as we answered a research question posed by the Sonoma County Water Agency.
   d. **Pillai, M.** Manuscript review, CSUPERB proposal review.
   e. **Rank, N.**
      i. Science 120 teaching collaboration.
      ii. Research collaborations with Santa Clara University, Stockholm University, and UC Berkeley.
      iii. Donated isolates of the organism that causes sudden oak death to a laboratory at UC Davis for further genetic analysis.
   f. **St. John, W.** Service learning opportunity for Entomology students:
      i. Using the protocols developed during the Fall 2016, Restoration Ecology course, worked with a group 7 students to survey benthic macro invertebrates in Copeland Creek
      ii. Copeland Creek Riparian Restoration (WATERS Collaboration):
      iii. Working closely with Caroline Christian, two ENSP students, Craig Dawson, and Claudia Luke, completed first stages of restoration of the south side of Copeland Creek on campus, between the ETC and the campus lakes. Helped organize and host three volunteer days, in collaboration with the Watershed Stewards Program (WSP; part of AmeriCorps).
iv. Hosted students from the Hanna Boys Center in both Biology 115 and ENSP 200 lectures.

v. Education Class Project: Criminal Justice major's "issue" project; interviewed on the subject of teaching evolution and creation in schools.

g. **Torok, T:**
   i. Thesis Committee member - Justine Gray, SSU
   ii. Biology Department Colloquium host (twice Fall 2016 and once Spring 2017)

2. **Chemistry**

a. **Negru, B.** Started the SST Research Support Group; met every Wednesday afternoon and supported students in their research projects with demos, workshops, and moral support.

3. **Computer Science**

a. **Gill, G.** Project evaluator: Synopsys-Sonoma County STEAM showcase

4. **Engineering Science**

a. **Hamel-Bissell, B.** Faculty mentor for residential education, presented to high school counselors for admissions and recruitment

5. **Geology**

a. **Anfinson, O.:**
   i. Referee- Basin Research (n=1, 2017)
   ii. Referee- American Chemical Society RFP (n=1, 2017)
   iv. Referee- The sedimentology of detrital thermochronology-Chapter 7 (2017)
   v. Referee- Journal of the Geological Society of London (n=1, 2016)
   vi. Referee- American Journal of Science (n=1, 2016)
   b. **James, M.J.** Started a collaborative program with the Department of English at SSU called "Writing with Geologists in the Desert" to combine the sciences and the humanities, to provide an opportunity to write in an inspirational geologic setting in the Death Valley area and in western Nevada; so far, one English professor has participated, Dr. Chingling Wo in Fall 2016.
   c. **Mookerjee, M.:**
      i. Strain and Vorticity Analysis of Mid-Crustal Rocks Exhumed Along the Denali Fault in the Eastern Alaska Range. Collaborator: Sarah Roeske, UC Davis
      iii. Will start a collaboration with Farid Farahmand (Engineering Science, SSU), if NSF proposal, "Analog modeling of fault asperity kinematics using a modified squeeze-box design and wax media" gets funded.
      v. Wax Analog Modeling of Fault Deformation. Students: Daniel Martin and Taylor Acosta
(Geology Dept.)

vi. Using the Structure From Motion (SfM) algorithm to 3D models of Geological outcrops. Students: Brandon Carroll and Sonny Hutchinson (Geology Dept.)

vii. Electron Backscatter Diffraction (EBSD) Analysis. Students: Nikki Asi and Gabrielle Flores (Geology Dept.)

viii. Masters Thesis Committee Member for:
   1. Laura Tait, 2016, MS in Earth and Planetary Sciences, UC Davis

ix. ISamples Steering Committee Member (The internet of Samples in the Earth Sciences)

x. Steering Committee Member for two proposed projects: EarthCube RCN: EC-GAS: EarthCube Community Geospatial Applications for Science and "EC3O" which is a variation on my initial EarthCube proposal: "EC3- Earth-Centered Communication on Cyberinfrastructure"

6. Kinesiology

   a. **Blanquie, S.** Working with Santa Rosa Junior College colleague on Concussions and MTBI
   b. **Carlton, E.** Mindfulness Project. This is an ongoing relationship between SSU and the Petaluma school district, specifically the South County Consortium, to have SSU undergraduates provide Mindfulness lessons to K-12 students.
   c. **Sokmen, B.** Advisor for our KIN Club, SSU climbing club, and SSU women's soccer club.
   d. **Sollanek, K.** As the faculty advisor, brought the 3 WINS Fitness program to SSU. This program originated at CSU Northridge. 3 WINS is a community-based fitness program that has SSU’s KIN students leading free group exercise classes at the Rohnert Park Community Center. Start Date: April 2017.

7. Mathematics & Statistics

   a. **Brannen, S.** Began designing new stretch developmental math courses with department faculty

8. Nursing

   a. **Brunk, T:**
      i. SAY organization, working to collaborate with this agency currently.
      ii. Santa Rosa High School football program, mentor students/keep stats
      iii. SHIP review of applications, mentor one student
      iv. Piner High school, nursing orientation with students
      v. Food drive with St. Rose School, volunteer with students to package potato's
      vi. ACE panel speaker
      vii. Safe zone training
   b. **Kelly, M.** Faculty Facilitator with Faculty Center in newly developed Online Teaching and Learning Institute.
   c. **Kindy, D.**
      i. 5/4/17: Symposium of Research and Creativity, sponsored student (Lee Reinertsen) poster Sustainable Compassionate Community Farm
      ii. 12/7/16: Sponsor for Graduate FNP Student Research Poster Symposium in collaboration with post-licensure research posters
      iii. Ongoing: Advisory Board and Treasurer for Sustainable Compassionate Community Farm (now CAASI Farm) - development of therapeutic community for those with ongoing mental health challenges
iv. Mentoring new faculty for psychiatric mental health nursing permanent position - a wonderful new faculty member!

d. Napoli, R.
   i. With Maternal Child Adolescent Health Advisory Committee, completed and submitted committee recommendation document to Sonoma County Board of Supervisors including topics; Reproductive Health Care for vulnerable population, Adverse Childhood Experiences, Mental Health, Alcohol and other drugs, and Early Learning.
   ii. Teaching a lesson to students at Children's School, topic on hand washing.
   iii. In Collaboration with pre-licensure first semester faculty restructured incoming nursing student orientation. Split into 2 orientations (May & August) to ensure requirements are accurately communicated, including organization of all student resources representative, Elsevier, ATI, Nursing Central, CNA Requirements, Nursing Skills orientation, Castlebranch requirements: background checks, drug screens, BLS and immunizations requirements.
   iv. Aided in development of website for ordering uniforms.
   v. In collaboration with department coordinators restructured Nursing Application and subsequent welcome (Acceptance) letter with contract.
   vi. Restructured ATI policy for ATI Comprehensive Exam with Kathleen Rockett/Co-Instructor for Nursing 414 to set benchmarks for achievement and higher benchmarks further National scored percentage of passing NCLEX. With policy change 50% of current cohort passed Comprehensive Exam at higher benchmark.

e. Ritter, B. Board member for California Association of Nurse Practitioners North Bay Chapter. Work as FNP in community clinic in rural setting which provides access to care including the underserved.

f. Rockett, K. Mentored a Windsor High school student interested in nursing. Total 45 hours.

g. Rose, J. Served as the Faculty Mentor for the Wellness-themed campus dormitories. Faculty Mentor for Wellness Residence Life.

h. Skidmoore, L. Continue to supervise FNP students in a homeless clinic at Brookwood in Santa Rosa every Saturday. Added guest lectures to Nursing 509 on hearing loss and elder abuse.

i. Wilkosz, M.E.:
   i. Collaborating with kinesiology providing workshop related to Heart Health for Presidential Inauguration.
   ii. Expanding your Horizons
   iii. Piner High School STEM Project
   iv. Presidential Inauguration Ceremony
   v. Mi Futero Event at SRJC
   vi. TRIO presentation

j. Wolcott, K:
   i. Collaborated with Dr. David McCuen and FNP professors to facilitate a lecture and discussion on current politics relating to health care for students in Nursing 410, three sections, and FNP students.
   ii. Collaborated with nursing faculty to provide a mock-interview experience for nursing students.
   iii. Participated in Seawolf Day - to represent nursing and answer questions from prospective students.
   iv. Facilitated in Student Research poster presentations in December 2016

9. Physics & Astronomy
a. **Qualls, J:**
   i. Sci 120/ Sci 220/ Phy 102 (Physics of Martial Arts couples with Phil 120 Philosophy of Martial Arts) - Creation of SSU innovation lab.
   ii. Science 220 development with permanent GE E status.

b. **Severson, S.**
   i. Organize SSU Department of Physics & Astronomy lecture series What Physicists Do (~12 talks per semester), serving students and the public. http://www.phys-astro.sonoma.edu/wpd
   ii. Organize and conduct SSU Observatory’s Viewing Nights (~ 4 public and ~ 3 course events per semester), serving students and the public.
   iii. Organized meetings with our local PhysTEC (Physics Teacher Education Coalition) group, including faculty, students and local teachers.
   iv. Assist in the organization of the SSU Department of Physics & Astronomy Senior Capstone Seminar, with additional bi-weekly preparation meetings with students.
   v. Organization of open house and presentation at Seawolf Decision Day.
   vi. Presentation for the Piner High School student SSU visit.

### I. MAJOR SERVICE CONTRIBUTIONS (e.g., committee memberships, organization of special events, new program design, new course design)

#### 1. Biology

a. **Bentley, L.**
   i. New course design for BIOL 350 (Fall/Spring 2017).
   ii. Elected to a SST Elections committee for Fall 2017
   iii. Elected to serve as Biology Dept. Web Manager (Spring 2017 onwards)

b. **Cohen, M.**
   i. Various departmental committees; Enterprise Board member and Audit Subcommittee member.

c. **Crocker, D.** National Academies of Science, Engineering and Medicine: Committee On The Assessment Of The Cumulative Effects Of Anthropogenic Stressors On Marine Mammals

d. **Pillai, M.** At-Large Academic Senator, School curriculum committee, Physics & Astronomy RTP committee.

e. **Rank, N.**
   i. EPC until June 2016
   ii. University Studies Curriculum Committee until June 2018. Chair spring 2017

f. **St. John, W.** A consulting member of the Outreach/Education/Development Committee in the Biology department as of May, 2017.

g. **Torok, T. ASM.**

h. **Whitkus, R.**
   i. Member of Writing/Editing Team - SSU WASC 2017 Institutional Report
   ii. SST representative to CSU Meta-Majors and Integrated Courses of Study Conference, Jan. 25, 2017 - San Francisco
   iii. SST representative to AP Regional Science Symposium, April 21, 2017 - San Francisco

#### 2. Chemistry

a. **Farmer, S.** Became a member of the SSU Ad Hoc Open Educational Resources Group
b. **Lillig, J.** Developed and offered a new Writing Intensive Course in Spring 2017 (CHEM 496) that incorporated a community service project on vaccine education.
c. **Negru, B.** Developed a new experiment for the general chemistry undergraduate lab that uses the wings of blue morpho butterflies to teach students about nanotechnology (more specifically super hydrophobicity and structural coloration).

### 3. Engineering Science

a. **Hamel-Bissell, B.** President's diversity council, SST curriculum committee, Vice President of Stanford Pride

### 4. Geology

a. **Anfinson, O.:**  
   i. Elected Member- Dispute Resolutions Board (2017-Present)  
   ii. Chair-Unmanned Aviation Systems Board (2016-present)  
   iii. Member- Radiation Safety Committee (2015-Present)  
   iv. Member- Copeland Creek Committee (2016-present)  
   v. Member- Geology Department Tenure Track Search Committee (2017)

b. **James, M.:**  
   i. Chair, tenure-track search committee Fall 2016-Spring 2017, hired Dr. Laura Waters.  
   ii. Chair, Department of Geology  
   iii. SST Curriculum Committee  
   iv. Academic Senate (elected to full 3-year term)  
   v. GE Subcommittee (elected to full 2-year term)  
   vi. SST Professional Development Committee

c. **Mookerjee, M:**  
   i. Organized the 2016 Biennial Structural Geology and Tectonics Forum at SSU (7 oral sessions, 6 poster sessions, 8 field trips, and 5 short courses).  
   ii. Taught 1-day short course on Introduction to Electron Backscatter Diffraction (EBSD): sample preparation and analysis.  
   iii. Leads a field trip for community members: Northern San Andreas Fault Deformation, Point Arena.  
   iv. Academic Senate, SST Curriculum Committee, Acting Chair of the Geology Department during current chair's sabbatical, Chemical Hygiene Committee, SSU Preserves Ambassador Committee, Geology Department Faculty Search Committee, Chair of Geology Department RTP Committee

### 5. Kinesiology

a. **Blanquie, S.** New Course Design at Santa Rosa Junior College. PASS Committee member

b. **Carlton, E.** Served on the search committee for the Associate Vice President for Faculty Affairs; Faculty Rights chair for the California Faculty Association.

c. **Sokmen, B.**:  
   i. Served as a chair for the Graduate Studies Subcommittee  
   ii. Served as Department of Kinesiology Graduate Coordinator  
   iii. Member of SSU’s Institutional Review Board (IRB) Committee  
   iv. Member of SSU’s Senate University Program Review Subcommittee (UPRS)  
   v. Member of SSU Senate Diversity Subcommittee (SDS)  
   vi. Member of Health Professions Advisory Program (HPAC)

d. **Sollanek, K.**:  
   i. A member of the search committee for the AVP of Marketing and Communications (started Summer 2016; postponed to be completed Summer 2017).  
   ii. A member of the Academic Freedom Subcommittee (AFS).
iii. A member of the Kinesiology Fitness Center Redesign Committee

e. **Winter, S.**
   i. SSU National Collegiate Athletic Association Faculty Athletic Representative
   ii. Chair Faculty Standards and Affairs Committee
   iii. SST Professional Development Committee
   iv. SST Curriculum Committee

6. **Mathematics & Statistics**

a. **Developmental Math Reform**
   The department obtained funding through the graduation initiative (GI2025) to develop the curriculum for and run pilot sections for four new stretch courses. We are in the process of to (eventually) replace all remedial math courses with 4 types of GE stretch courses.

   Math 131A/B Finite Math for Business
   Math 150A/B Transformational Geometry
   Math 161A/B Functions and Rates of Change
   Math 165A/B Data Visualization and Analysis

   The two-semester sequences will allow students to satisfy their remedial math requirement and their GE B4 requirement simultaneously, with all 6-8-units in the sequence (3-4 units per semester) counting towards the 120 unit requirement for graduation. In some cases this will shorten students’ time to graduation. An added benefit is that students will not experience the stigma of being placed in a remedial mathematics class (and the attendant stereotype threat that further depresses performance).

   Teams of instructors are starting to develop materials for the courses, supported by PD workshops and through collaborations over the summer.

b. **Simulation and Bootstrapping in Elementary Statistics (Coordinators: Herring and Newman)**
   The department continues to offer professional development workshops for statistics instructors to learn about the effective use of simulation and bootstrapping methods in teaching elementary statistics (Math 165). In 2016/17 all sections of Math 165 used the new curriculum and the instructors were supported in the adoption process through mentoring by Susan Herring and Elaine Newman

c. **Brannen, S.** Member of Academic Senate and Academic Senate Executive Committee, chaired SST Curriculum Committee (Fall 2016), Putnam Exam advisor, Pi Mu Epsilon advisor, Ballet Folklorico advisor, Provost Search Committee

d. **Byrne, M:**
   i. Member of the Math and Stats Department’s developmental math task force;
   ii. Co-organizer of the Northern California Undergraduate Mathematics Conference;
   iii. Member of tenure-track hiring committee

d. **Ford, B.** chair of the faculty, presidential selection committee, GE subcommittee, URTP committee, MAA Committee on the Mathematical Education of Teachers Newman, E., SSU CFA president, presidential selection committee, VP finance search committee

e. **Herring, S.** SST Assessment Coordinator, ES search committee

f. **Lahme, B.** MAA Committee on the Teaching of Undergraduate Mathematics, Chair of the SST curriculum committee

g. **Shott, M:**
   i. SST representative to the Student Affairs Committee
ii. SST representative to the Graduation Initiative Group  
iii. Department Scheduling Committee  
iv. Chair of the SST Professional Development Committee  
v. Volunteer Coordinator for Sonoma County’s "Expanding Your Horizons" STEM workshop for middle school students  
vi. Co-organizer for the 2017 Northern California Undergraduate Mathematics Conference hosted at Sonoma State in March 2017

7. Nursing

a. Kelly, M:  
i. Dispute Resolution Board  
ii. SST Elections  
iii. Department RTP  
iv. Department Search  
v. Advisory Boards - MCC, SRJC, COM Nursing Programs  
vi. Post Lic Director  
vii. Led Post-Lic Curriculum Revision

b. Kindy, D:  
i. Summer 17: redesigning Nurs 560, Research and Theory in Primary Care  
ii. Winter 16: Partial redesign of Nurs 304 written assignment

c. Napoli, R:  
i. Department: Baccalaureate Council, Faculty Council  
ii. University: Housing Committee  
iii. Nursing Club Faculty Advisor: the club has wanted to get involved in helping with the student pantry on campus. Housing Committee has been working to get pantry up and running to allow for student resources; Nursing Club will partner with Associated Student to staff and help run pantry once open and available for SSU students.  
iv. Sub-Committee to develop Financial Literacy program for University, foundational steps to develop financial literacy education plan.  
v. Community: Maternal/Child Adolescent Health Advisory Board (Sonoma County).  
vi. Organized special event on campus for Petaluma High School HOSA Group (40 student): for students interested in a career in healthcare, visited campus and heard about opportunities in Nursing, Kinesiology and Health Professions Advisory Program to learn about other opportunities in healthcare. Murali Pillai, Bulent Sokmem and Mary Ellen Wilkosz spoke as guest speakers to the group.

d. Ritter, B. FNP team meetings: course content contributions pertaining to clinical reasoning

e. Rose, J:  
i. Curriculum Committee member  
ii. Expanding Horizons Workshop Leader  
iii. Cali Calmecac Language Institute volunteer

f. Skidmore, L. contributed to new general evaluation criteria for clinical courses

g. Wilkosz, M.E. IRB, Academic Senate, Grad Studies Subcommittee, Tenure Track Search Committee, Department RTP committee, SEIE Curriculum Committee, Director FNP Program, Director Pre-Licensure Program, Coordinate the Transition to Practice Program with Dr. Napoli.

h. Wolcott, K.:  
i. Member of Professional Development Committee for SST  
ii. Research Consultant for Sutter Santa Rosa Regional Hospital Research Committee.  
iii. Board Member for Sigma Theta Tau, Lambda Gamma - Nursing Honor Society
iv. Investiture - collaborated with nursing faculty to present student projects in community.

8. Physics & Astronomy

a. Cominsky, L:
   i. External Reviewer, Cal Poly San Luis Obispo Physics Department, February 2017
   ii. External Reviewer, San Jose State Physics Department, November 2016
   iii. University RTP (continuing)
   iv. SSU Academic Foundation board (continuing)
   v. Board of Directors, Astronomical Society of the Pacific, 2016 - 2019
   vi. AAAS/PHYS division Executive Committee member, 2015 â€” 2018

b. Qualls, J:
   i. SST Director of Academic Planning and Resources
   ii. Science Symposium - Organizer
   iii. SST Curriculum Committee
   iv. Engineering Faculty Search Committee
   v. USCC Committee (Chair Fall 2017)
   vi. WASC Core Competency Assessment - Critical Thinking/Information Literacy
   vii. WASC Core Competency Assessment - Quantitative Reasoning
   viii. RTP Committees (Thomas Targett/Brendan Hamel-Bissell/Rita Premo/Matty Mookerjee)
   ix. Sonoma County Economic Development Board Forecast Exhibitor Food & Beverage Manufacturing Student/Industry Symposium – Organizer

c. Severson, S:
   i. Member of the School of Science and Technology Professional Development Committee
   ii. Member of SSU Structure and Functions subcommittee of the Executive Committee of the Academic Senate
   iii. Lead the BS-Astrophysics program design through the School Curriculum committee and Dean review process, will continue to EPC in the fall.
   iv. Completed a submission for the Institutional Report for our WASC reaccreditation effort, including material for the Meaning, Quality and Integrity of the Degree (MQID) section.
   v. Completed submission to make ASTR 305 a Writing-Intensive Course. This was accepted and Dr. Targett will teach this course as a WIC in the fall.

d. Targett, T:
   i. Secretary to the SSU Faculty Senate; elected voting member at weekly Senate/Ex-com meetings
   ii. Junior Faculty Representative, CFA SSU chapter
   iii. Physics and Astronomy representative to the SST curriculum committee
   iv. Revised 2017 Commencement Planning Committees (university wide & school level)
   v. Faculty advisor, Sonoma State eSports group (140 student members)
   vi. Faculty advisor, SSU Society of Physics Students (30 student members)
   vii. Organizer and docent, SSU Public Observing Nights (4 per semester)
   viii. Expert speaker at SSU new faculty welcome event
   ix. Presentation at Dinner with the Profs, Living-Learning Community SSU (20 attendees)
   x. Faculty editor for W. W. Norton & Company textbook Understanding Our Universe 3rd edition, provided feedback for 2 chapters ($300 honorarium)
   xi. Local SSU faculty liaison for Sacramento State online particle physics course
   xii. Re-designed ASTR-231 Lab-E & Lab-EE (Orders of Magnitude 1 & 2) exercises

J. ADDITIONAL IMPORTANT ACCOMPLISHMENTS
1. **School level**

a. Women In Tech Initiative effort to support and encourage female students pursuing degrees in Computer Science, Engineering Science, and Physics; led by Dr. Sara Kassis.
   i. Create an App Workshops – led by student instructors; held in Fall 2016 and Spring 2017
   ii. Hosted showing of the documentary *CODE: Debugging the Gender Gap* in March 2017; followed by panel discussion.
   iii. SMUD Solar Regatta – team competed in self-constructed, solar-powered boat race competition in Sacramento; team was awarded 4 trophies: Judge's Choice, Student's Choice, Slalom Race Winner and Best Competitor Award.

b. Science & Tech participated and exhibited at the 2016 SACNAS National Diversity in STEM Conference in Long Beach, October 2016; SACNAS is an organization dedicated to fostering the success of Chicano/Hispanic and Native American scientists; Conference programming is tailored to support undergraduate and graduate students, postdoctoral researchers, and career professionals. Over 3,800 students and professionals attended. Lauren Morimoto (Kinesiology and Directory of Diversity and Inclusive Excellence) represented SSU along with Science & Technology Alumnus John Michael Vincent Coralde and Chemistry faculty member Monica Lareas. Collaborative planning process with Cyndie Morozumi (Campus Life) and Tammy Kenber (Human Resources).

c. April 2017 Computer Science/School of Science & Technology joined Academic Alliance of the National Center for Women & Information Technology (NCWIT); led by Mark Gondree (CS)

d. SSU’s Observatory is currently being renovated and is slated to reopen on September 8, 2017 with a ribbon cutting ceremony and the first public viewing night of the season. The Observatory, maintained and manned by the Physics & Astronomy Department, has been in operation for 41 years hosting astronomy classes, faculty and student research, and free public viewing nights.

e. Held First STEM Diversity Celebration, Sept. 20, 2016, a collaboration of MESA (Carolyn Peruta), EOP, United for Success, McNair Scholars, LSAMP, and the School of Science & Technology

f. Science & Technology provided demonstration table at the 2017 Sonoma County Economic Development Board Spring Economic Forecast Meeting; gave 400+ attendees a chance to see what SSU is doing in a tangible way, April 2017.

g. Food & Beverage Industry Symposium, April 27, 2017, Sonoma County Fairgrounds; partnership with Sonoma County Career Technical Education (CTE) Foundation; Jeremy Qualls led collaboration.

h. SST Continued STEM Certificate Pathway project with Piner High and Santa Rosa Schools including fall kick-off event at Piner High and spring visit to SSU Science & Tech. Also facilitated faculty mentorship of Piner student projects culminating at the Piner High STEM Showcase, May.

i. The School of Science and Technology participated in the North Bay Discovery Day at Sonoma County Fairgrounds in October 2016. SST hosted the *Walk Through the Watershed* exhibit and the Engineering Science Department hosted a robotics exhibit. This year there were over 15,000 visitors (see http://www.northbayscience.org for more information). SST has participated since the inaugural event in 2011.

j. The Expanding Your Horizons (EYH) Conference was held on the SRJC campus in April. EYH seeks to nurture girls’ interest in math and science and to encourage them to expand their career visions to include STEM based careers. SST faculty and staff fill critical roles in the conference including organization (facilities, web services, volunteer coordination, etc.) and workshop leaders. **Dean Stauffer** serves on the EYH Board of Directors.

k. CSU Council on Ocean Affairs, Science and Technology (COAST) Representatives – **Crocker, D.**, **Lares, J.**, **Stauffer, D.**
Place, S., (faculty representatives) and Stauffer, L. (administrative).
l. CSU Program for Education and Research in Biotechnology (SUPERB) Representatives – Farahmand, F., Lillig, J., Lin, J., and Pillai, M. (Faculty Consensus Group), Stauffer, L. and Lillig, J. (Strategic Planning Council).
m. 2016 Excellence in Teaching Award to Lauren Morimoto, Kinesiology
n. 2017 Presidents Award for Excellence in Scholarship to Dan Crocker, Biology; 2016 President’s Award for Excellence in Scholarship to Lynn Cominsky, Physics & Astronomy and Suzanne Rivoire, Computer Science.
o. Offered two new physics laboratories (PHYS 102): Physics in the Kitchen and Physics of Martial Arts (taught with coupled Philosophy course).
p. Family Weekend, Sat, Oct 15, 2016 ; Discovery in Science & Technology: Student Research Showcase
q. Seawolf Decision Day, April 2017; all Science & Tech Departments hosted visiting students with open laboratories, demonstrations, tours, and presentations.
r. Hayward Public Schools Campus Visit – Science & Tech hosted 150+ 10th grade students; department demonstrations and tours.
s. Hosted Cal Poly for an informational meeting covering their Masters of Professional Studies in Dairy Technology program, Friday, Sept 16.

2. Biology

3. Chemistry
a. Chemistry of Beer lecture by Dr. Charles Bamforth, Professor of Chemistry at UC Davis, Sept 26, 2016, 5:30pm, Ballroom A, following by reception and beer tasting 6:30-8:30 in the grand ballroom. About 125 attended.
b. Negru, B. Research group successfully constructed a high-resolution localized surface plasmon sensing apparatus to study gold nanoparticle substrates and the wings of iridescent butterflies.

4. Computer Science

5. Engineering Science
a. Decker, D. Led CSUPERB I-CORPS team to first place against a dozen or more other CSU teams in the I-CORPS Biotechnology challenge. In addition to funds received during the challenge, the I-CORPS team is eligible to apply for $50,000 in follow-up funding. In addition to the efforts of our four undergraduate student team members, we appreciate the guidance of Professor Farid Farahmand and an industry advisor, Pocket Radar CEO Chris Stewart.
b. The ES Department participated and contributed to several student events this year:
   i. Sonoma County Make-A-Thon, March 4, 2017; 20 electrical engineering students participated.
   ii. SSU Phi Beta Delta International Research Contest, three teams 1) Switch Electric Vehicle Inverted with 2 students, 2) Water Monitoring System with 2 students, and 3) Data Harvesting with 3 students.
   iv. Smart City Conference, June 2017
   v. Math Conference, three student presenters, Mar 25, 2017

6. Geology
a. **Anfinson, O.** Undergraduate Research Students Advised- (n=9):  
   i. Elijah Messinger (BS), Victoria Simaneau (BS), Justin Casaus (BS), and Anthony Gamboa (BS)- (GEOL 495)- Depositional Ages and Provenance of Franciscan Strata, Angel Island State Park and Mt. Tamalpais, CA  
   ii. Maddison Leffler (BA), James Peoples (BS), and Mayerline Rico (BS)- (GEOL 495)- Determining the Origin of the Sur Series within the Salinian Terrane, California  
   iii. Maureen Redmond (BS)- (GEOL 426-Senior Thesis Detrital zircon U-Pb geochronology provides constraints on the depositional age of Sur Series metasediments within the Salinian Terrane, California  
   iv. Kaitlyn Fleming (BS)- (GEOL 426-Senior Thesis) Insight on the origin of the Sur Series within the Salinian Terrane, California evaluated through petrography, zircon LA-ICPMS U-Pb geochronology, and Hf isotopes  

b. **Mookerjee, M.** Submitted two NSF proposals in January (still pending): "Analog modeling of fault asperity kinematics using a modified squeeze-box design and wax media" and "MRI: SSU Acquisition of a Variable Pressure Scanning Electron Microscope with integrated EBSD, EDS, WDS, and CL."

6. **Kinesiology**

a. **Carlton, E.** Eight years ago created the pre-Occupational Therapy concentration (listed as Interdisciplinary) in the Kinesiology major. Each year the major has grown and now 25% of our majors are in the concentration. I personally advise the 80+ students and our graduates have been very successful in being accepted into OT Masters and Doctoral programs.  

b. **Sokmen, B.** Serving as chair of three master’s committees and serving on several as a committee member.  

c. **Sollanek, K.:**  
   i. Served as a reviewer for the journal Medicine & Science in Sports & Exercise; Reviewed one manuscript during the 2016-2017 academic year.  
   ii. Served as a reviewer for the journal The Journal of Sports Medicine & Physical Fitness; Reviewed five manuscripts during the 2016-2017 academic year.  
   iii. Serving as chair of one graduate student’s thesis project committee and serving on several other students committees as a member.  

d. **Winter, S:**  
   i. California Athletic Trainers Association Symposium Committee Member  
   ii. California Athletic Trainers Association Managing Board Parliamentarian  
   iii. California Athletic Trainers Association Approved Provider Liaison to Board of Certification for Athletic Trainers  
   iv. California Athletic Trainers Association Award Chair

7. **Mathematics & Statistics**

a. 2017 Northern California Undergraduate Math Conference: This year’s conference featured 24 talks by undergraduates from 12 universities and colleges. Around 150 students and faculty attended the conference. The conference was funded by the MAA Golden Section, Pi Mu Epsilon, SST, SSU Academic Affairs, and the Math and Stats Department. (Organizers: Martha Shott, Martha Byrne, Brigitte Lahme, Math club, Pi Mu Epsilon)  

b. Students and faculty teams went to several conferences, e.g. State of Jefferson Mathematics Congress at Whiskeytown Lake and the MAA Section Meeting at Santa Clara University, Northern California Undergraduate Mathematics Conference at SSU.  

c. Putnam Exam (approximately 10 participants/year, December) 6-hour national exam for undergraduate mathematics majors, one student received 10 points, the highest SSU score in at
least 4 years. (Faculty advisor: Sam Brannen)

d. Math Modeling Competition (3 3-student teams/year, February) 4-day competition where
student teams develop a model for an applied mathematics problem and submit a mathematical
paper outlining their approach and solution. 2 teams received the designation “successful
participant”, one team received designation “honorable mention” (Faculty advisor: Martha
Shott)

e. Brannen, S:

f. Two SSU LSAMP students were selected to a 10-week REU in Uzbekistan, another to a summer
research expedition in Costa Rica.

g. Three SSU LSAMP students were selected to the Bridge to the Doctorate program at CSULA
($32,000 per year plus tuition and fees).

8. Nursing

a. Nursing pre-licensure program received accreditation from the California Board of Registered
Nursing (BRN).

b. Kelly, M:
   i. Mentoring new faculty - 5
   ii. Maintaining and forging new community partnerships with health agencies
   iii. Ongoing collaboration with 5 service area colleges
   iv. Worked with new AVP Academics and Registrar’s office to streamline advising and
   improve degree completion on time rates.

c. Kindy, D. A big thanks for the Spring 17 Grad Student Poster award in Nursing for Tina Nixon and
crew!

d. Napoli, R:
   i. Faculty Advisor for the Nursing Club, attended three conferences with current pre-
nursing and current juniors and senior nursing students.
   ii. Attended California Nursing Student Association (CNSA) Northern CA Membership
Meeting (Summer 2016), Annual State Convention- CNSA in Visalia CA, at this meeting
one of our current nursing students was elected to the State Board of Directors-
Community Health Director, Sonoma State Nursing Students acted as delegates and
voted on legislative resolutions for recommendations in nursing education (Fall 2016).
   iii. Annual Convention for National Student Nursing Association (NSNA) held in Dallas,
Texas, Sonoma State Nursing Students served as Delegates at the National Convention
and current nursing student who was elected to State Board Position attended as
delegate and California State Board Member.
   iv. Coordinator of Summer Transition to Practice Program through Extended Education.

e. Ritter, B. Facilitator for Cardiology speaker for FNP EKG Seminar

f. Rockett, K. Continues to work in the clinical arena one 12 hour shift per week as well as every
3rd weekend; Staff RN IV I lead/facilitate the Evidence Based Research Committee which meets
monthly; active on unit with supporting 2 short research projects improving our patient
satisfaction scores.

g. Rose, J. Volunteered at Cali Calmecac Language Academy.

h. Wilkosz, ME. Mentoring 4 (soon to be 5) new tenure track faculty members

9. Physics & Astronomy

a. Cominsky, L:
   i. Frank J. Malina Astronautics Medal, International Astronautics Federation, April 2017
   ii. Team awards:
      1. Gruber Prize in Cosmology to Rai Weiss, Kip Thorne and Ronald Drever and the
LIGO Scientific Collaboration 2016


b. Qualls, J:
   i. Santa Rosa Chamber of Commerce Excellence in Education Award, August 2016.
   ii. California Teaching Standards and CBEST evaluator.
   iii. North Bay Make-a-Thon SSU Representative Organizer
   iv. SSU Lifelong Learning science club speaker
   v. Hosted Adam Savage at the GMC
   vi. Nominated for SSU Excellence in Teaching Award

c. Severson, S. Engaged in an ongoing effort to replace and enhance our observatory facilities on campus. In the last year we replaced the building, moved the telescopes to the department for refurbishment, and completed electrical, networking and landscaping improvements to the observatory.