

UCSB Probability & Statistics Actuarial Program





UNIVERSITY AWARD WINNER ASUALTY ACTUARIAL SOCIET

Presenters: Daniel Rondon, President UCSB Actuarial Association

Raya Feldman, Director of UG Program PSTAT



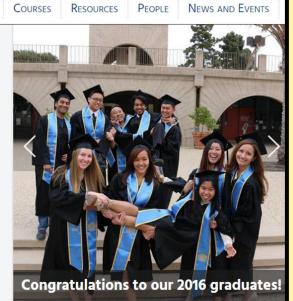
DEPARTMENT OF STATISTICS AND APPLIED PROBABILITY

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About

Our department is a diverse community engaged in areas of education and research including Actuarial Science, Financial Mathematics, Theoretical Statistics, Applied Probability, and Biostatistics; this research spans a wide range of interdisciplinary fields including environmental science, computer science, and biomedical science. We are home to the Center for Mathematical Finance and Actuarial Research, an interdisciplinary research center providing leadership in quantitative finance. We also provide consulting services through our statistical consulting laboratory: StatLab.



Announcements

Congratulations to PSTAT Alum Loren Nickel!

Loren Nickel, Class 1996, Director of Business Risk and Insurance at Google, is the 2017 RIMS Risk Manager of the year!

Upcoming Events

6th Annual UCSB Actuarial Career Fair 2017

October 12, 2017 -11:00am to 2:30pm

The UCSB Actuarial Association is proud to

http://www.pstat.ucsb.edu/index.htm

- We encourage students to utilize their resources
- The Department of Statistics and Applied Probability website (<u>www.pstat.ucsb.edu</u>) is an excellent tool available for students at any time
- Learn about our majors, upcoming events, seminars and more!



Actuarial Program Home Page

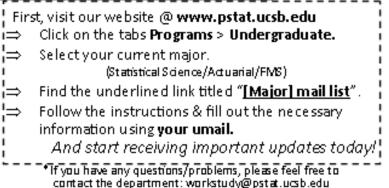
	Actuarial Science Program		
Undergraduate Menu Majors Minor Actuarial Science Program BS in Actuarial Science BS/MS in Actuarial Science	The Department of Applied Probability and Statist only one of its kind in California and only one of tw CSB Actuarial Program was recognized as a Center of UCSB is one of the four winners of the 2016 Casualty inaugural year UCSB Actuarial Program ranked #1 in the nation by th	Actuarial Excellence (CAE) by the Society of Actuar Actuarial Society (CAS) University Award in the pro	Find everythin
Actuaries Actuarial Exams & VEE Coursework Actuarial Association	Actuarial Program	Actuarial Connection	Actuarial
Actuarial Connection More Information Scholarships Student Clubs Advising Undergraduate Research Resources	B.S. in Actuarial Science Five-Year Combined B.S.and M.S. in Actuarial Science Actuarial Exams and VEE Coursework Information Other PSTAT Undergraduate Programs PSTAT Graduate programs 296AB Applications	UCSB Actuarial Association (UCSB AA) UCSB Facebook Actuary Club Actuarial Program mail list UCSB Actuarial Program Advisory Board Actuarial Program Highlights/Photo Actuaries in the News	Science Major
Tutors FAQs	More Resources		
Alumni Join Our Listservs Statistical Science Major	Actuarial Exam Reimbursement Program and Scholarships Actuarial Academic/Career Resources Campus Resources Career Advice for Actuaries	Data Science Club Study Abroad Program Resume Submission: CLOSED Donate to UCSB Actuarial Program	

http://www.pstat.ucsb.edu/instruction/actuary.htm

Check Out Our ListServ!

- There is a listserv designed for each of the majors offered by the PSTAT Department, as well as one for graduate students.
- Students will receive a variety of important emails straight from the Undergraduate Advisor and other faculty members
- Gives access to announcements, events, job and internship postings and additional information regarding their major!

Sign up for your major's LIST SERV with these EASY steps!!





Actuarial Science B.S.

http://www.pstat.ucsb.edu/instruction/actuary_science.htm

Jndergraduate Menu	Overview	Quick Links
Majors Minor Actuarial Science Program BS in Actuarial Science Transfer Student Guidelines BS/MS in Actuarial Science Actuaries Actuarial Exams & VEE Coursework Actuarial Association Actuarial Connection More Information Scholarships Student Clubs Advising Undergraduate Research	In the Department of Statistics and Applied Probability, we offer B.S. in Actuarial Science which will prepare you for a career in the actuarial profession. Multiple actuarial designations are available nowadays, including Fellow of the Society of Actuaries, Fellow of the Casualty Actuarial Society, Certified Enterprise Risk Analyst and Registreed Professional Liability Underwriter. Our degree will help you pass the actuarial exams which are necessary to obtain these certifications and future career advancement. You can also join theActuarial Association to meet other students who share your interests and aspirations. All actuarial science majors will be assigned a faculty advisor. Their advice is crucial in designing a coherent undergraduate program. In the course sequence PSTAT 296AB, Research for Actuaries, students will complete research projects in the area of actuarial science. Each project will be supervised by at least one ladder faculty member and approved by a project committee that includes at least two members of the department's ladder faculty. Find out more about who Actuaries are Recommended preparation for major:	Major Sheet Recommended Schedule Guidlines for transfer students interested in actuarial science major Five-year Combined B.S/M.S. in Actuarial Science Who are actuaries?
Vesources Futors FAQs Din Our Listservs Latistical Science Major ubscribe!	Two years of algebra Courses in plane geometry and trigonometry at high school Join our listserv The Undergraduate Office maintains a listserv that is used to disseminate information to Actuarial Science students. To subscribe to the Actuarial Science majors listserv, simply join the Actuarial Science major mail list.	

ACTUARIAL SCIENCE MAJOR, B.S. - 2017-2018

PREPARATION FOR THE MAJOR

UNITS YET TO COMPLETE

Math 3A-B	8
Math 4A-B	
Math 6A-6B and Math 8*	
PSTAT 10	
Computer Science 16 (Students need to take Computer Science 8 as a prerequisite for 16)	4
Writing 107A or 107B	

Note: Math 3A-B, 4A-B, 6A-B, 8, and PSTAT 10 must be completed with a grade of C or above. *Note: Either Math 4A, 4B, 6A, or 6B must be completed with a grade of "B" or better in order to take Math 8.

Recommended courses: Econ 1 & 2 (fulfills VEE), and Phil 3 or 4

UPPER-DIVISION MAJOR

52 UD units in PSTAT and Mathematics are required, distributed as follows:

А.	PSTAT 120A (or W 120A), 120B
B.	PSTAT 126, 160A, 174 12
C.	PSTAT 170, 171, 172A, and 160B or 172B 16
D.	8 units from PSTAT 105, 120C, 127, 130, 131, 160B or 172B (not used in Area C), 173, 175, 176, 183 8
E.	8 units from: other PSTAT courses not used above; Math 104A-B-C, 108A-B,

<u>Recommended electives:</u> Econ 134A (VEE), 130 (SAS) For SOA track: PSTAT 172B, 173, 175, 131 For CAS track: PSTAT 127, 131, 160B, 173, 183

Note: Math 100A-B, 101A-B, 102A-B, 193; PSTAT 109, 193 will NOT apply to the major.

MAJOR REGULATIONS

PREREQUISITESCheck the General Catalog for the prerequisites to all listed courses.	
P/NP GRADING OPTIONNot allowed for any major course (prep or UD major), including courses applied to the	5
major from other departments.	
SUBSTITUTIONS	n.
RESIDENCE REQUIREMENTSAt least 20 UD units in major while in residence at UCSB.	
G.P.A. REQUIREMENTSAt least 2.0 overall UC average in all upper-division major courses and all courses (Pr	ep
and UD) for the major, including courses in excess of minimum requirements.	
DOUBLE MAJORS	ed
simultaneously to both UD majors.	

http://www.pstat.ucsb.edu/undergrad/actuarial-science/bs

Actuarial Major Changes

Wawanesa Insurance Scholarship

- Third and Fourth years, Juniors and Seniors, min GPA 3.25
- > Actuarial B.S. and Financial Math and Statistics B.S.
- > Application deadline: November 15, 2016

<u>http://www.pstat.ucsb.edu/instruction/wawanesa.htm</u>

- PSTAT 120B and the rest of UD PSTAT courses
 - > Must receive C or higher to meet upper-division pre-requisites

New PSTAT Classes

- PSTAT 183 Fundamental Actuarial Concepts (previously PSTAT 194)
- PSTAT 127 Advanced Statistical Models
- PSTAT 176 Advanced Mathematical Finance (second year)

Schedule posted at

http://www.pstat.ucsb.edu/instruction/classinfo.htm

Actuarial Association

- Meet the officers
- Various types of events and opportunities
 - Providing Assistance
 - Giving guidance, answering questions, organized studying
 - Networking Opportunities
 - Peers, professors, professionals
 - Genuine Experiences
 - Instruction, practice, real application
- Why should you join?
 - Preparing students for their schooling and their career
 - Help students find their right pathways
 - Perks, benefits, and opportunities

<u> http://actuaryclub.pstat.ucsb.edu/</u>

Membership

- Dues are \$30 for the entire year
- Pay Darius (or any other officer in person)

or

- Venmo "UCSB Actuarial Association"
- Provide individual information such as name, email, phone number, and number of exams passed
- Access to all events and privileges
- Join us on Facebook:

https://www.facebook.com/groups/ucsbactuary/

For more information, visit:

http://actuaryclub.pstat.ucsb.edu/about-us/membership/

Association Benefits and Opportunities

- Exam Reimbursement and Materials
 - Reimbursement for passed exams after the first one
 - Study manuals in PSTAT department
 - Discount codes for online studying programs
- Mentorship Program
 - Guidance for new students
 - Campus life
 - Coursework and exams
 - In the career
 - Friendships and networking

The sign up survey for the program can be found here: https://docs.google.com/forms/d/e/1FAIpQLSdgnkvK4Lt3ZC ASPy8-WOpJFjM3OB6y1-1aJrbMnD_MqwdZwA/viewform

Case Study: Why should you do it?

- Friendship
- Management and planning skills
- Working with Professors
- Answers the question
 "What do Actuaries do?" through experience
- Understanding how to treat data
- Understanding the importance of feasibility
- Feel proud talking about something



What makes YOU valuable?

- Excel/R/Any analysis skills (An Analytical Mind)
- Reporting/Writing
- Research and Reading
- Planning/Tracking
- Communication
- Presentation
- Ideas

Lookout for a questionnaire.



Plans for the Year

GOAL: Form a team with developed and known skillsets.

- Sessions start 3rd Week of October.
- Starting Bi-weekly/ then every week.
- Practice old case studies together.
- Time sensitive practice sessions.

Have fun, connect and learn.

UC Santa Barbara's 7th Annual Actuarial Career Fair

Thursday October 12th, 2016 In Corwin Pavilion

Anthem. blue 🗑 of california UnitedHealth Group*

Actuarial Association Member Exclusive 11:00AM – 1:00PM Meet the Companies Open to ALL Majors 1:30PM – 2:30PM

> Center of Actuarial Excellence

CSAA Insurance Group, a AAA Insurer

MERCER

IMCO

FARMERS

INSURANCE

FRANSAMERICA

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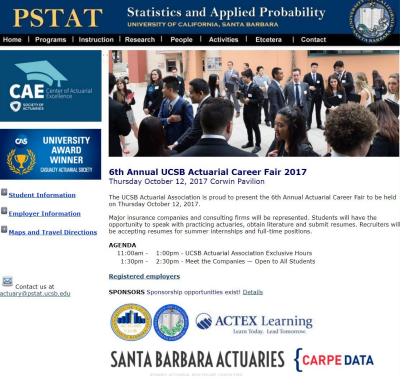
KAISER PERMANENTE

Fidelity

Willis Towers

Watson

Actuarial Career Fair Website



- We highly recommend students within the Actuarial Science major check-out our Annual Career Fair on our website
- The event is open to; however paid Actuarial Association Members have entry to an all exclusive hour
- Students get to meet with representatives from major companies involved in the actuarial field
- Great opportunity to apply for summer internships and full-time positions

For more information, visit:

https://regulation.pstat.ucsb.edu/sites/ActFair/ActFair2017.htm

Career Fair Registration

Registration is required for students seeking to attend our Annual Career Fair as well as any AA members that want to participate in the **Exclusive Actuarial Association Hour.**

CAE Center of Actuarial Excellence	STUDENT INFORMATION Instruction for Student Participants Online Registration for Meet the Companies Section
	Online Registration for Exclusive Actuarial Association Hour Section
V ACTUARIES	Sample Sophomore Resume
Student Information	Sample Senior Resume
Employer Information	View available employment opportunities, present resumes to employers who are seeking qualified applicants, and apply for positions all in one convenient location and all at no cost!
Maps and Travel Directions	Statistics & Applied Probability University of California Santa Barbara, California 93106-3110
Contact us at actuary@pstat.ucsb.edu	

Please visit the website for the appropriate forms.

http://www.pstat.ucsb.edu/ActFair/index2015/student_index.htm



Information for Attendees

Event Details

When: Thursday, October 12th, 2017

Location: Corwin Pavilion

Dress code: Business Formal (We also suggest bringing a Notebook!)

Program

- 11:00AM 1:00PM
 Exclusive hour for UCSB Actuarial Association Members
- 1:30PM 2:30PM

Meet the Companies – Open to ALL Students

For more information visit:

https://regulation.pstat.ucsb.edu/sites/ActFair/ActFair2017.htm



Information for Attendees

Deadlines

Registration for the Exclusive Hour are due by **Tuesday, October 3rd 2017 at 4:00PM** Resume Submissions are also due by **Wednesday, October 4th 2017 at 12:00PM**

To sign up to volunteer, fill out this survey:

https://docs.google.com/forms/d/1kZuoTNg1qGtR2D-6nd4HETFi9WbJNPkMKND6mfIK6MU/viewform?edit requested=tr

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For more information visit:

https://regulation.pstat.ucsb.edu/sites/ActFair/ActFair2017.htm

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and the state	Fall	120	017
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WEEK 1	RESUME WORKSHOP	MON 10/2 (l) TUE 10/3 (ll)	5 - 9 PM Sobel Seminar
	INTERVIEW WORKSHOP WITH INTERNSHIP PANEL	FRI 10/6	2-4 PM Girvetz Hall 11
WEEK 2	INFO SESSION WITH WILLIS TOWER WATSON AND AETNA	WED 10/11	6:30 - 8:30 PM McCune Confe (6020 H5SB)

WEEK 3

WEEK 4

WEEK 5

VEEK 6

WEEK 7

WEEK 8

EEK 9

CAREER FAIR INFO SESSION WITH CENTENE AND AON

GAME NIGHT

UCSB COURSE PLANNING

BOWLING NIGHT

BASKETBALL

EXCEL WORKSHOP

MOVIE NIGHT

ACTUARIES ON ICE

5-9 PM MON 10/2(1) Sobel Seminar Room SH 5607F TUE 10/3(II) 2-4 PM Girvetz Hall 1115 6:30 - 8:30 PM McCune Conference Room (6020 HSSB) 11 AM - 2:30 PM THU 10/12 **Corwin Pavilion** 6:30 - 8:30 PM THU 10/12 Theater and Dance West 1701 THU 10/19 2-3:30 PM Phelps Hall 1160 WED II/I

Zodo's Bowling

10 AM - 12 PM Rob Gym

SAT II/II

SSMS 1003

2-4 PM

When submitting resumes:

- Submit in pdf format, one page only
- Save resume as • LastName.FirstName.Resume.pdf
- Email aa.ucsb@gmail.com
- Subject Line as "Resume"
- And include your name, email, and year
- Remember the deadlines!

UCSB Actuarial Major Changes

NEW LD course PSTAT 10 covers R, SQL, databases and more

Preparation for major requirement
 Must receive C or higher to meet upper-division prerequisites

- PSTAT 120B and the rest of UD PSTAT courses
 - > Must receive C or higher to meet upper-division prerequisites
- Approved: Choice between PSTAT 172B (SOA) and 160B (CAS) for area C
- Change: PSTAT 174 required; PSTAT 120C elective
- New UD PSTAT Classes check catalog for prerequisites
 - PSTAT 194 (Winter) Introduction to Spark Programming for Big Data Analytics
 - PSTAT 132 (Spring) Statistical Data Science
 - PSTAT 127 (Winter) Advanced Statistical Models (second year)

Schedule posted at http://www.pstat.ucsb.edu/instruction/classinfo.htm

Brief Overview of SOA VEE Changes

https://www.soa.org/Education/General-Info/2016-vee-requirements.aspx

- <u>Current VEE Requirements</u>
- Economics (CAS)
- Corporate Finance (CAS)
- > Applied Statistics

- VEE Effective Summer 2018
- Economics (CAS)
- Accounting & Finance (Econ 3A, 134A) (CAS)
- Mathematical Statistics (PSTAT 120B)
- Math Stat VEE will require B- or better in PSTAT 120B
- Take Econ 3A to prepare for Accounting and Finance VEE. Does not apply to students completing VEE Econ 134A prior to July 1, 2019
- Pass VEE PSTAT 126 & 174 prior to July 1, 2018 to get credit for the new VEE
 Mathematical Statistics and the SRM (Statistics for Risk Modeling) Exam.

Brief Overview of SOA Exam Changes

Year 2017-18

- Exam P (SOA & CAS): remains basically unchanged
- Exam FM (SOA & CAS): PSTAT 171, very small part in FM
- Exam MFE (SOA and CAS): Reduce stochastic calculus portion, add portfolio theory topics. PSTAT 170, small part in 176.

Summer 2018

- Exam MFE changes to IFM (Investment & Financial Markets) (SOA & CAS)
- Exam C replaced by STAM (Short-Term Actuarial Math) (173) (SOA)
- Exam SRM (Statistics for Risk Modeling, NEW) (126, 174, 131) (SOA)
- Exam PA (Predictive Analytics, NEW, PROJECT) (SOA)



CAS Exam Changes

17 CAS Education Requirements to ACAS	2018 CAS Education Requirements to ACA
Corporate Finance	 Accounting and Corporate Finance
conomics	 Economics
Exam 1* — Probability	 Exam 1* — Probability
Exam 2* — Financial Mathematics	 Exam 2* — Financial Mathematics
Exam 3F* — Models for Financial Economics	 Exam 3F* — Investment and Financial Marke
Exam 4* — Construction and Evaluation of Actuarial Models	Modern Actuarial Statistics I
Exam S — Statistics and Probabilistic Models	Modern Actuarial Statistics II
Exam 5 — BasicTechniques for Ratemaking and Estimating Claim Liabilities	 Exam 5 — Basic Techniques for Ratemaking a Estimating Claim Liabilities
Exam 6 — Regulation and Financial Reporting (Nation- Specific)- US, Canada, Taipei	 Exam 6 — Regulation and Financial Reportin Specific)- US, Canada, Taipei
Online Course 1 — Risk Management and Insurance Operations	 Online Course 1 — Risk Management and In Operations
Online Course 2 — Insurance Accounting, Coverage Analysis, Insurance Law, and Insurance Regulation	 Online Course 2 — Insurance Accounting, Co Analysis, Insurance Law, and Insurance Reg

Brief Overview of CAS Exam Changes

Year 2017-18

- Exam P (SOA & CAS): remains basically unchanged
- Exam FM (SOA & CAS): Starting 7/2017, all FM material is covered in PSTAT 171
- Exam MFE (SOA and CAS): Reduce stochastic calculus portion, add portfolio theory topics (PSTAT 170, small part in 176)

STARTING MAY 2018

- Exam MFE changes to IFM (Investment & Financial Markets) (July 2018)
- Exams C & S replaced by MAS-I and MAS-II (May 2018)
- MAS-I: PSTAT 160AB, 172A, 120B, 126, 127, 174
- MAS-II: PSTAT 173, 127, 120C, 131

Arthur A. Science

123 Abrego Rd, Isla Vista, California 93117 Tel: (805) 866-7885 email: ascience@umail.ucsb.edu

EDUCATION University of California Santa Barbara, Bachelor of Science in Actuarial Science, GPA 3.8/4.0 Graduation Date: June 2019

ACTUARIAL EXAMS/VEE Exam P: Sitting in March 2018 Satisfied VEE Area Requirement in Economics

WORK EXPERIENCE

McConnell's Ice Cream, Santa Barbara, CA September 2016- May 2017

- Served customers and answered customer's questions about the ice cream.
- Performed cleaning duties to sanitize the ice cream bins and the store.
- Closed the store on nights the manager was not there.

Pay Junction, Santa Barbara, June 2017-September 2017

- Answered 40 70 calls a day of people applying for a credit card by phone.
- Communicated with customers who were ordering products by answering
- Questions and handling concerns.

UCSB Summer Transitions, June 2017-present

- Administer campus tours to high school seniors visiting the campus.
- File folders in the records department.
- Work with administrative computer programs to organize records of student applications

RELEVANT COURSEWORK

- Calculus, Linear Algebra, Differential Equations, Transition to Higher Math
- Intro to Computer Science, Problem Solving with Computers
- Principles of Economics-Micro and Macro

COMPUTER EXPERIENCE

- Computer Languages/Packages: Python, C++.
- Microsoft Excel, Microsoft Word, Microsoft PowerPoint.

AWARDS/LEADERSHIP

- UCSB Honors student
- UCSB Actuarial Association: Member, October 2016-present

ACTIVITIES/HOBBIES/LANGUAGES

- Hobbies: Enjoy hiking, cooking, playing violin.
- English (fluent), Spanish (intermediate), and Japanese (basic)

Comment [Advisor2]: Include your class descriptions. This is only a sample and may not apply to you.

Comment [Advisor3]: You do not need to claim to be an expert, only to have experience. Do not be shyl Sometimes CS courses include a project. This is the place to enter this information. Include JAVA If you took AP in CompSci

Comment [Advisor1]: Keep resume to one page only. Use different fonts and sizes if you need to get it to one page. Format of resume may be changed to your liking. Remember that the information presented on your resume needs to be relevant. Arthur A. Science

123 Abrego Rd, Isla Vista, California 93117

Tel: (805) 866-7885

Graduation Date: June 2018

VEE Applied Statistics: in progress

VEE Corporate Finance: satisfied

VEE Economics: satisfied

email: ascience@umail.ucsb.edu

EDUCATION

University of California Santa Barbara, Bachelor of Science in Actuarial Science, GPA 3.8/4.0

ACTUARIAL EXAMS/VEE

Exam P: Pass May 2016 Exam FM: Pass May 2017 Exam C: Sitting November 2017

ACTUARIAL WORK EXPERIENCE

Towers Watson, Pension and Funding Valuation

Actuarial Intern June 2017 – August 2017

- For a "mock" client and later for a "real-world" client, reviewed benefit statements, performed benefit calculations, produced Expense Valuation report and Funding Valuation report.
- Worked alongside consultants and analysts on project teams, analyzing data, running valuation reports, processing cost components, filing government forms, and creating final documents given to clients.
- Performed research and created multiple presentations presented to clients by consultants.

COMPUTER SKILLS/DATA ANALYSIS PROJECTS/RESEARCH EXPERIENCE

- Computer Languages/Packages: Python, C++, SAS, and R. Experience with Microsoft Excel, Microsoft Word, Microsoft PowerPoint.
- Time Series Class project (individual): Analysis of 10 years of airline sales data and prediction of future sales using seasonal ARIMA methodology. Software: R.
- Research Project class (graduate level): Predictive Modeling in Healthcare Using Regression Techniques (team project). Using data from an insurance provider investigated healthcare expenditures and applied variable selection to produce models for predicting the cost that insurers will spend on covered members. Statistical techniques such as data transformation, linear regression, and least angle regression were used to develop the models. Software: R.

RELEVANT COURSE WORK

- Calculus, Linear Algebra, Differential Equations, Transition to Higher Math (2yrs)
- One year of calculus-based Probability and Mathematical Statistics
- <u>Applied Statistics</u>: Times Series (VEE), Regression Analysis (VEE), SAS, Data Mining
- Applied Stochastic Processes
- Actuarial and Finance: Math Finance, Fixed Income Markets, Actuarial Statistics, Risk Theory
- Economics: Micro and Macro (VEE), Financial Management (VEE)
- <u>Computer Science</u>: two programming courses
- <u>Business and Administrative Writing</u>. Coursework includes a team project to create a business plan for an actuarial software company start-up.

AWARDS/LEADERSHIP

- UCSB Honors student
- Alpha Phi Omega Leadership Award 2014-2017
- UCSB Actuarial Association: Member, October 2014-present; Treasurer, May 2017-present
- President of Alpha Phi Omega Community Service Organization 2015–2017

ACTIVITIES/HOBBIES/LANGUAGES

- Enjoy hiking, swimming, board games.
- English (fluent), Spanish (intermediate), and Japanese (basic)

Comment [Advisor1]: Keep resume to one page only. Use different fonts and sizes if you need to get it to one page. Format of resume may be changed to your liking. Remember that the information presented on your resume needs to be relevant.

Comment [Advisor2]: You do not need to claim to be an expert, only to have experience. Do not be shyl For project, include what you did in the project: goals and methodology. Classes with projects: some CS classes, PSTAT 126, 127, 174, 131, 175, 105, possibly others. Writing 1078

Comment [Advisor3]: Include YOUR class descriptions, this is only a sample.

U Resum Senior Sample