

Welcome to the 11th Annual Academic Festival

Friday, 29 April 2005, 12:30 AM - 5:30 PM
Saturday, 30 April 2005, 8:30 AM - 5:00 PM
Rieke Science Center

The Natural Sciences Academic Festival provides undergraduates, alumni, and faculty an opportunity for presentation of their research and Capstone accomplishments in a professional meeting model in order to provide the students with a conference experience.

2005 Festival Committee Members: Matthew Smith (chair), Myriam Cotten, Matthew Hacker, Tosh Kakar, Rose McKenney, Jeff Stuart, Ann Tolo, Allison Tonge, Kahra Wahler, Jill Whitman, Mike Wright



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The Division of Natural Sciences
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Time Class	Presenter	Title	Description	
3:30-3:50	RaeLynn Endicott	The Multifunctional Roles of Estrogen	This presentation discusses the non-reproductive functions of estrogen with particular focus on estrogen's role in neuroprotection. It also highlights the importance of estrogen's multifunctional roles with respect to menopause and hormone replacement therapy.	499
3:50-4:10	Darrick Mattsen	Your Enemy - My Friend: Plant Volatiles as an Indirect Defense Mechanism	The use of plant volatiles as an indirect defense mechanism, their release attracting predators and parasitoids of herbivores in order to reduce plant damage and herbivory.	499
4:30-4:50	Sara Perry	The Green Beard Effect	Kin selection and altruism provide mechanisms for organisms to pass their genes indirectly without reproducing, but under the green beard effect alleles for altruism would not have to take chances - alleles would automatically recognize another organism carrying the same allele.	499
4:50-5:10	Corey Fish	Development and Implementation of Vectors for Gene Therapy	Gene therapy is a cutting edge approach to elucidate cures for genetically-based diseases. The history of gene therapy as well as areas of current research will be discussed.	499
5:10-5:40	Jacob Henderson	Neuroendocrine Control of Ovulation in the Female Rat	The neural control of ovulation is not completely understood. This presentation aims to discuss our latest knowledge in understanding this critical event. Emphasis will be placed on the role played by the tachykinin family of neuropeptides.	499

Time Class	Presenter	Title	Description	
9:20-9:40	Patrick Bennett	Mechanisms of Intracellular Transport in Neurons	This presentation will be a review of intracellular transport in neurons. Discussion will center around the molecular motors, kinesin and dynein, and their interactions with other components of the transport system.	499
9:40-10:00	Kendall Blair	Erythropoiesis: Characterization of Red Cell Development and Its Importance in Curing Blood-Related Diseases	Erythropoiesis is the development and maturation of red blood cells. Regulation and gene expression studies of the three erythropoietic waves (embryonic, fetal and adult) will play an important role in the creation of treatments for blood-related diseases, such as, sickle-cell anemia and thalassemias.	499
10:00-10:20	Jessica Patrick	Regeneration of Pancreatic Beta-Cells as a Cure for Type 1 Diabetes	The non-obese diabetic mouse model was cured for type 1 diabetes by the regeneration of its own pancreatic Beta-cells. How this treatment stopped the autoimmune disease directed against the pancreatic cells will be discussed.	499
11:05-11:15	Jocelyn Klosowski	Aging and Senescence: An Evolutionary Review	Aging is the process of senescence and an organisms' cells are programmed to die. The evolutionary theories of aging will be discussed: Mutation Accumulation, Antagonistic Pleiotropy and Disposable Soma Theory. Grandmother's Hypothesis and sexual selection will also be evaluated as selection pressures.	499
11:25-11:45	Ian Ric N. Pulido	Gibberellin Signal Transduction Pathway in Plants	This presentation will look at the general characteristics of gibberellins, the various mutants determined in finding the negative repressors of GA signal transduction pathway, and the current model of the GA signal transduction pathway.	499
12:05-12:25	Jennifer Schlies	The Herbicide Atrazine and Its Effects on Frogs	Atrazine is a common herbicide used throughout the world by farmers. When frogs are treated with atrazine, malformations and mutations are present, especially with regard to sexual development.	499

Friday Computer Science and Engineering Rieke 103

Time Class	Presenter	Title	Description	
12:30-1:05	Brian Grace Troy Harter Kristen Wilson	WIDS: Web-Based Infrastructure Documentation System	Using a combination of PHP, MySQL, XHTML, XML, JavaScript, and CSS, WIDS allows a large institution to document various infrastructures. WIDS organizes these infrastructures based on their location within the institution's campus and provides access via a Web-based front end.	499
1:05-1:30	Jimmie Lee	A Comparison of Databases and Server-Side Web Scripting	This project explored access methods and databases used to develop Web applications. An application was developed to evaluate combinations of databases (Oracle, MySQL) and server-side scripting languages (PHP, ColdFusion). Results are discussed in a research paper.	499
1:30-2:00	Daniel Lawless	Averti	Averti is a location-aware scheduler and reminder for Series 60 devices. I will present the client/server architecture and plug-in interfaces that make this application work.	499
2:00-2:30	Aaron Frazier	NURBEdit: A Student Learning Tool	This project allows a student to learn the complexities of a Non-Uniform Rational B-Spline (NURB). The GUI displays a NURB, including Control Points and Knot vectors, and their corresponding values. The user can then quickly understand the mathematics of a NURB by creating and then manipulating it.	499
3:30-4:00	Igor Kirillov	Diabetes Remote Management System (DRMS)	The DRMS is being created for monitoring the blood sugar levels remotely, transmitting the data to a server, storing it in a data base and providing access to the data to qualified professionals via several different media. The working model of the selected modules of the system will be presented.	499
4:00-4:25	David Reime	A Pumpkin's Story: An Animation by David Reime	Animations are used in films, games, commercials, and as special effects. In this project I researched the process used in industry for the production of computer animation. I created a short animation, using Maya, and a research report.	499
4:25-4:40	Thomas Coffman Dustin Moyer Takashi Tsuchiya	Gasoline Engine-Powered Minibike	A gasoline engine-powered minibike was planned, built, and tested. Various parts and components were purchased locally and on ebay.com and assembled into the final product, resulting in a fully functional minibike that runs and stops.	131

Friday Computer Science and Engineering Rieke 103

Time Class	Presenter	Title	Description	
4:40-4:50	Emily Ewen Carrie Resnik	Wireless Video Security Device	Our project will be a surveillance video system designed to be a security device in our dorm wing. There will be a wireless camera with a receiver that will connect to a TV. We will create a camouflage device that will hide the camera. We will end up with a video of our dorm wing.	131
4:50-5:00	Kyle Eskelin Michael Plotke	Guitar Pedal	We have designed a pedal which allows a guitarist to send his signal through three consecutive loops. Each loop is enabled by a footswitch. It gives the guitarist a versatile signal routing solution and a way to bypass noisy devices in the signal path.	131
5:00-5:10	Kambiz Fashay Kyle Fay	The Tennis Ball Gun	This project is called a tennis ball gun. The tennis ball gun works by using compressed air to force the tennis ball out of the chamber. The compressed air is released when the piston is activated, and it will force the tennis ball out for distances over 100 yards.	131
5:10-6:00	Peter Parsons	TBA		

Saturday Computer Science and Engineering Rieke103

Time Class	Presenter	Title	Description	
8:30-9:00	Yukiko Kozuka Chin-Tang Lin Chihkuei Sheu	eLute - On-Line Bookstore	This project deals with implementation and design of a Web-based application. Using Tomcat SSL mode enable, MySQL in AES encryption and JSP programming, we have designed and developed, specifically for the PLU community, an on-line bookstore for purchasing and selling books.	499
9:00-9:30	Marita Quiroz Bennett Walker	Search and Rescue Vehicle	As a search and rescue vehicle, our project incorporates both software and hardware components into a robotic vehicle. Tethered to a workstation for power and control through a joystick, it is designed to pick up items with a claw-like instrument.	499
9:30-10:00	Adam Gentz Malcolm West	Game-Bugs.com	Game-Bugs.com is a Web forum that aids gamers who encounter bugs in their software. An Oracle server stores data while PHP pages interface between users and the database. Searching is more topical than standard keyword based search engines. Users can enter bugs, find solutions and help others.	499
10:00-10:30	Shane Hall	Programming for GNOME with GTK+	GTK+ is the toolkit behind the GNOME desktop environment. This discussion will give a brief introduction to GTK+, along with a look at the benefits and challenges involved with building software projects around existing toolkits.	N/A
10:45-11:15	Nathan Berg	Circuit Board Design at 10GHz	The communications industry is slowly coming around to 10Gb/s fiber links on national and local levels. To interact with these links, someone has to design the circuit boards. What are some considerations a designer makes to get a working prototype the first time?	499
11:15-11:40	Eric Finseth	Plug-In-Oriented Design: pGina2	pGina2 is a redesign of the existing pGina (http://pgina.xpasystems.com/) software application with a focus on improving modularity, extensibility, and plug-in development. Improvements in logging, settings, and plug-in management are also addressed.	499
11:40-12:05	Trevor Anderson	Work Shift Scheduler	The Work Shift Scheduler is an application allowing access to data held in a MySQL database via Java applets. Work schedules are generated using the Simulated Annealing algorithm. This project is implemented for use with the PLU CATS Help Desk, with a Windows EXE version in development.	499

Saturday Computer Science and Engineering Rieke103

Time Class	Presenter	Title	Description	
12:05-12:30	Kasey Frerichs	Za! Instant Messenger	Za! is a small scale, portable, rapidly deployable, Java based instant messenger client and server system. Features are typical of those found in mainstream messengers with the client interface based on Yahoo! Messenger.	499
1:30-1:55	April Buckley	Classroom Assessment Techniques	Classroom Assessment Techniques, or CATs, are tools that instructors use to evaluate how well the students are learning what is being taught. The CATs project has electronically implemented three of these techniques for use in beginning computer science lab sessions at PLU.	499
1:55-2:25	Bryce Bockman	Implementing Lightweight TCP	The Transmission Control Protocol (TCP) is the protocol of choice for moving packets reliably across the Internet; however, it is often thought to be fairly bulky and complex. I will take a look at what it takes to get a minimal version of TCP running on a very simple embedded system architecture.	N/A
2:25-2:55	Jacob Nelson	Building E-Commerce Applications with Amazon Web Services	Amazon Web Services provides software developers direct access to Amazon's ever-growing technology platform and product data. Why did Amazon open their API? How can we use it with standards like XML and SOAP to build our own applications?	101
2:55-3:25	Rob Rydberg	A GasP of Fresh Air: A High Speed Distributed FIFO Scheme for Managing Interconnect Parasitics	Interconnect delays are increasingly becoming the dominant source of performance degradation in the nanometer regime. On chip communication now requires multiple clock cycles for signal propagation between modules. We propose having distributed FIFO buffers to facilitate communication in SoC design.	N/A
3:40-4:10	Carter Smithhart	From PLU to Workplace: Joint Unmanned Combat Air System	Source of performance degradation in the nanometer regime. On chip communication now requires multiple clock cycles for signal propagation between modules. We propose having distributed FIFO buffers to facilitate communication in SoC design.	N/A
4:10-4:40	Kenneth Perrine	Getting Data In Line and On Its Way: Fast Imaging for Biology	Software and hardware for performing high-speed, multispectral imaging on a confocal microscope has been developed at Pacific Northwest National Laboratory to automatically register misaligned images and perform other image processing functions.	N/A

Time Class	Presenter	Title	Description	
12:30-1:00	Joel Zylstra	For the Earth - Working Toward Sustainability	PLU, as an institution committed to preparing students for global citizenship, has the opportunity to carry out its mission of caring for the community, for others and for the earth. Through education and operations, For the Earth will provide a plan for the university as it works toward sustainability.	499
1:00-1:30	Erika Helm	Wildlife Management in Norway and Alaska	This project compares and contrasts wildlife management techniques in Norway and Alaska with a focus on wolves for illustration. Background on management regulations and cultural differences will be given and differing views of wildlife and controversies surrounding its management will be examined.	499
1:30-2:00	Kit McGurn	Ecotourism: Economics, Conservation, and Sustainability in Latin America	This project studies the ecotourism industry in Latin and Central America and examines the claim that ecotourism can effectively combine economic and conservation concerns in a sustainable fashion. Case Study countries will include Costa Rica, The Galapagos Islands, and Belize.	499
2:00-2:30	Stephanie Puhl	Participatory Involvement for our Environment and our Future	I will explore participatory involvement within the Environmental movement as it works to reach beyond, yet work within, current political infrastructure to improve political accountability and the promotion of democracy to create and maintain a healthy environment able to sustain all of life.	499
3:30-4:00	Michelle Stark	The Use of Greenways to Reduce the Effects of Habitat Fragmentation Through Urbanized Areas	This project looks at fragmented habitats within urban areas and how we have attempted to address problems associated with these isolated patches of habitats through greenways. Seattle is the main focus of this study with comparisons to cities throughout the United States.	499
4:00-4:30	Susan McPartland	Environmentalism and the Military: McChord Air Force Base	There has long been discussion and dispute over the U.S. Military's involvement with the environment. This paper seeks to understand how the Military conceptualizes and implements environmental management, focusing on the local McChord Air Force Base.	499
4:30-5:00	Jennifer Halaas	Feasibility Analysis of Mason Creek as a Salmonid Bearing Stream		499

Time Class	Presenter	Title	Description	
5:00-5:30	Bryce Robbert	Sustainability in Public Land Management	The Chambers Creek properties are under development for the sustainable use of waste water and biosolids. This project will evaluate stakeholders' needs and how Pierce County has met those concerns thus far.	499
5:30-6:00	Somer Goulet	The Importance of Forests for Our Environment	Throughout the history of the world civilizations have had to deal with deforestation. From the Abruzzo Mountains in Italy, where the native trees have been exploited to extinction, to the North Cascades in Washington, deforestation has been an on-going battle across the world.	499

Time Class	Presenter	Title	Description	
1:30-2:00	Jonathan Payne	Using Stream Stability to Assess the Effects of a Changing Climate on Subsistence Economies in Southern Yukon Territory	Climate change and its effect on physical and human systems in the Yukon Territory is a major concern. Aboriginals are closing land claims that are in conflict with their culture, namely land ownership. Stream stability and private property are used to predict changes in aboriginal land ownership.	499
2:00-2:30	Miranda Heimbuch	Ellis Creek Basin: Geology, Microbiology and Ethics	This project is an investigation of microbiological pollution, the geologic conditions that contribute to the pollution, and the ethics of water quality clean-up in the Ellis Creek Basin.	499
2:30-3:00	Julie Locke	The Ethics of Frankenfood	An ethical look at the production and consumption of genetically modified foods and their impact on human health and the environment. Specific analysis will be done on genetically modified corn.	499
3:00-3:30	Philip Coburn	U.S. Drug Policy in Colombia: State Strengthening and Coca	Evaluation of five years of intensified U.S. involvement in a country that is living through over forty years of political instability and volatile civil conflict. Colombia's problems are vast and cannot be solved with a few billion dollars in aid money and a forceful drug eradication program.	499

Time Class	Presenter	Title	Description	
8:30-9:00	Rachelle Nordman	Paleontology and Stratigraphy of the Northern Coast of the Olympic Peninsula	An overview of the paleontology, stratigraphy and lithology of the northern coast of the Olympic Peninsula with a comparison of field work to published literature.	499
9:00-9:30	Christen Elliott	Phreatic Volcanic Eruptions: Dangers in the Pacific North West Cascade Mountain Range	This report looks at the dangers of phreatic volcanic eruptions and the dangers associated with them. The dangers would be to the surrounding area of the volcanoes, cities, towns, National Parks, and to the volcanoes themselves.	499
9:30-10:00	Nicole St. Amand	Lineations Connected to the Tacoma Fault's Southern Splay in the Puyallup Valley	The Tacoma fault is an active fault 50km in length that could potentially extend further east into the Puyallup Valley. With the possibility of a larger fault extending into the Puyallup Valley, a greater geologic threat is proposed to the surrounding areas	499
10:00-10:30	Melissa Maloney	A Study of Geomagnetic Pole Reversals Recorded in Igneous Intrusions: the Tatoosh Pluton Example	A comparison of the magnetic pole reversal recorded within the cooling body of the Tatoosh Pluton with other such reversals. The phenomenon of magnetic pole reversal is discussed, as is the occurrence of reversals in igneous intrusions around the world.	499
11:00-11:30	Alisa Browne	Relationship of Streamflow to Shallow Groundwater at Lee Vining Creek in Mono Basin, California	This project focuses on analyzing data that record the shallow groundwater depth near Lee Vining Creek in Mono Basin, California. Data were collected from 1995-2003, and they provide important information for understanding the influence of streamflow on the water table near the creek.	499
11:30-12:00	Keriann Pederson	Analysis of Upstream Delta for Hypothetical Removal of the Dam at Chambers Creek, Steilacoom, Washington	The West Tacoma Paper Mill used the Dam at Chambers Creek from 1910 until 2000, when the mill was shut down. This study examines the structure of the delta upstream from the dam in order to predict the possible effects of removal.	499
12:00-12:30	Dalton Shotwell	Liquefaction Assessment of the Greater Tacoma Area	This report looks at the potential of liquefaction induced by an earthquake in the Puget Sound. Methods involve comparing geologic settings between San Francisco, CA, and Kobe, Japan, areas of documented past liquefaction, and Tacoma, WA.	499

Time Class	Presenter	Title	Description	
12:30-1:30	Eric Finseth	Categories, Functors, and Natural Transformations, Oh My! An Introduction to Category Theory	Category theory is a developing area of mathematics that provides a basic conceptual and notational framework within which to view mathematical structures, particularly in algebra. This talk will focus on a few applications of category theory.	499
1:30-2:30	Mollie Lisle	Explorations into Mathematical Knot Theory: A Look at Colorability	Mathematical knot theory has rapidly expanded in recent years, with new ideas of how to classify and represent knots. We will focus on classifying knots by exploring the properties of a generalized coloring of a knot. Our discussion will utilize the Alexander polynomial.	499
3:30-4:30	Chester Boyles	Generalized Inverses and Least Squares	We explore generalizations of the inverse matrix for non-square matrices and for square but singular matrices. Generalized inverses are closely linked to the least squares problem.	499

Time Class	Presenter	Title	Description	
9:15-10:15	Lindsey Yates	Pascal's Triangle	We will explore the triangle's past and its connections to abstract algebra. We will look at the little known figurate numbers found within the triangle and their place in the triangle's history. We will also show how the mod n patterns of the triangle give a visual representation of quotient groups.	499
10:30-11:30	David Eichholtz	Mathematical Game Theory and Probability	This presentation will give a brief look at game theory. It will focus on zero-sum and non-zero-sum games along with some applications of both.	499
11:30-12:30	Leanna Christian	Multivariate Statistical Analysis: Applications to Tourist Preferences	This presentation is a discussion of a conjoint analysis based survey of consumer preferences in Abruzzo, Italy. The goal is to develop a model to help analyze travel package preferences based on a person's demographics and travel background.	499
1:30-2:30	Elizabeth Jacobson	From Checkerboards to Symmetry Groups: Tilings and Abstract Algebra	The properties that define tilings, with particular reference to regular tilings, can be described through concepts of abstract algebra. This project focuses on the correlation between tilings and abstract algebra, with emphasis on symmetry groups and equivalence classes within regular tilings.	499
2:30-3:30	Cory M. Kantorowicz	Pattern Formation by E. Coli - A Mathematical Investigation	This project investigates the biological phenomenon of pattern formation by E. coli in semi-solid and liquid phase models. We will examine reaction diffusion and chemotaxis mechanisms utilizing partial differential equations in order to construct and analyze a mathematical model.	499

Time Class	Presenter	Title	Description	
1:30-1:45	Joshua Houston	The Physics of Music	A demonstration of the audible Shepard paradox: following will be a description of the reasons for possibility phenomenon and a description of some common music and physics relations.	499

Posters

#	Student	Title	Time	Dept	Class
1	Allison Kanarr Joey Meszaros	Determination of the Critical Micelle Concentration for Lithium Dodecyl Sulfate	2:00-4:00	CHEM	344
2	Megan Bourassa Clinton Dahlberg	Formation of ϵ -Caprolactam from Cyclohexanone	2:00-4:00	CHEM	336
3	Shiela Jones Kris Peterson	Analysis of Zinc in Soils at WSU, Puyallup, Biosolids Plots	2:00-4:00	CHEM	338
4	Megan Bourassa	Cochineal as an Indicator	2:00-4:00	CHEM	338
5	Shiela Jones	Identification of an Unknown Product	2:00-4:00	CHEM	336
6	Clinton Dahlberg	Concentration of Nitrate in Local Freshwater Sources	2:00-4:00	CHEM	338
7	Paul Clark	Analysis of Polymer Samples Using Matrix Assisted Laser Desorption Ionization Time of Flight Mass Spectrometry	2:00-4:00	CHEM	435
8	Bethany DeVilbiss	Characterization of a Molecule Using MALDI-TOF	2:00-4:00	CHEM	435
9	Erin Hoge	Caffeine Content in Energy Drinks and Diet Soda	2:00-4:00	CHEM	435
10	Bethany DeVilbiss	Nucleoside Disphosphate Kinase A	2:00-4:00	CHEM	405
11	Erin Hoge	Pyruvate Carboxylase	2:00-4:00	CHEM	405
12	Elizabeth Stuhlmiller	Potassium Content in Oranges	2:00-4:00	CHEM	338
13	Kaitlin Zurawski	Minty Freshness	2:00-4:00	CHEM	338
14	Denise Bowers Christine Huynh Elizabeth Padilla Patrina Pellet Set Thach Lindsay Tozier	Water Analysis of Farm Run-Off	2:30-3:30	BIOL	328
15	Angie Carlson Emily Fenske Amanda Jennings	Organic vs. Conventional Mouthcare Products	2:30-3:30	BIOL	328
16	Elizabeth Stuhlmiller Andrea Wells	Streptococcus Salivarius and S. Mutans: Beware of Mouthwash	2:30-3:30	BIOL	328
17	Lorraine Homem Jane Ko Jessica Patrick Amanda Pokorny	Water Analysis of E. Coli in Ground Beef	2:30-3:30	BIOL	328

Posters

#	Student	Title	Time	Dept	Class
18	Andrea Cox Angela Jenkins Lynn Tu Tim Wagner	Milk Versus Chocolate in the Fight Against Acne	2:30-3:30	BIOL	328
19	Lorraine Homem	Functional Assays of Antimicrobial Peptides (AMPs) Piscidin 1 and Piscidin 3 from Hybrid Striped Bass	2:00-4:00	CHEM	UR
20	Stacia Rink	DNA Cross-linking by Aziridinomitosene, a Derivative of the Antitumor Agent Mitomycin C	2:00-4:00	CHEM	FAC
21	Paul Clark	Synthesis of Polystyrene/Polybutadiene Block Copolymers via an Anionic Polymerization to Atom Transfer Radical Polymerization Crossover Technique	2:00-4:00	CHEM	RS
22	Bethany DeVilbiss Erin Hoge	Investigation of NAD/NADP Biosynthesis in E. Coli: Quinolinate	2:00-4:00	CHEM	RS
23	Jeremy Hutchins Jennifer Schlies	Effects of Bisphenol A on development of <i>Bombina orientalis</i> embryos	2:30-3:30	BIOL	UR
24	Jacob Henderson	Role of Tachykinins in Modulating Luteinizing Hormone Secretion in the Female Rat	2:30-3:30	BIOL	UR
25	Kendall Blair	Characterization of an In Vitro Model of Murine Embryonic Erythropoiesis	2:30-3:30	BIOL	RS
26	Jeni Hoffert	Effect of Copolymer Architecture on Compatibilized Polymer Blends Studied Via Optical and Atomic Force Microscopy	2:00-4:00	CHEM	UR
27	Shiela Jones Yelena Nikolayeva	Study of the Secondary Structure of Lipid-Bound Antimicrobial Peptide Piscidin-1 through Circular Dichroism and Solid-State Nuclear Magnetic Resonance	2:00-4:00	CHEM	UR
28	Jonathan Payne	Determining Stream Stability Using Field and Remote Sensing Data in the Upper Yukon River Basin	2:30-3:30	GEOS	UR
29	Allison Kanarr	Phase Behavior of a Diblock Compatibilizer Polymer Blend Studied Using High Temperature Dynamic Light Scattering	2:00-4:00	CHEM	UR
30	Corey Fish	Exploring the Association of Novel Bacteria in Bacterial Vaginosis (BV) Using Culture-Independent Molecular Techniques	2:30-3:30	BIOL	491
31	Tim Wagner	A Study of the Effects of Changing Functional Groups on a Fluorescent Compound	2:00-4:00	CHEM	RS
32	Erin Ham Megan Hockert	Molecular Assessment of the Role of Methanotrophs in Nitrogen Fixation in Lake Washington Sediment	2:30-3:30	BIOL	UR

Posters

#	Student	Title	Time	Dept	Class
33	Tim Wagner	Solid-State NMR Study of Piscidin 1 Bound to Hydrated Lipid Bilayers	2:00-4:00	CHEM	497
34	Erin Ham	Chlorophyll Content in Leaves at Different Depths in the Plant	2:00-4:00	CHEM	338
35	Tim Wagner	A Quantitative Analysis of Fluoride Content in Toothpaste and Mouthwash	2:00-4:00	CHEM	338
36	Teresa Alba	Iron Amounts in Multi-Vitamins: Experimental vs. Label Values	2:00-4:00	CHEM	338
37	Tim Wagner	Identification of an Unknown Product	2:00-4:00	CHEM	336
38	Jeni Hoffert	Characterization of Myrtenol using Nuclear Magnetic Resonance (NMR)	2:00-4:00	CHEM	435
39	Keane Lindblad	Calcium Concentration in Various Teeth (Human, Tiger Shark, Alligator, Horse and Pig)	2:00-4:00	CHEM	338
40	Jeni Hoffert	Barley Alpha Amylase: Structure and Mechanics of Enzymatic Action	2:00-4:00	CHEM	405
41	Keane Lindblad Cody Morrissey	Synthesis of 2-Isopropenyl-5-methylcyclohexanol From (S)-(-)-Citronellal and Tin (IV) Chloride	2:00-4:00	CHEM	336
42	Kim Bosley	Iron Content in Gerber Baby Cereal	2:00-4:00	CHEM	338
43	Cody Morrissey	Is Your Organic Fruit Organic?	2:00-4:00	CHEM	338
44	Meghan Schleif	Function of Enzyme During Glycolysis for E. Coli	2:00-4:00	CHEM	405
45	Patrina Pellett	Attempted Synthesis of Polystyrene	2:00-4:00	CHEM	336
46	Meghan Schleif	Caffeine Analysis of Coffee	2:00-4:00	CHEM	435
47	Elizabeth Sloan	Supplemental Vitamin C	2:00-4:00	CHEM	338
48	Blaise Bellows	Determination of the Amount of Alcohol in Mouthwash	2:00-4:00	CHEM	338
49	Elizabeth Sloan	Palladium Catalysts	2:00-4:00	CHEM	336
50	Kari Berntson	Caffeine Concentrations in Energy Drinks	2:00-4:00	CHEM	338
51	Patrina Pellett	Using ICP to Determine Cadmium Uptake by Plant Tissues	2:00-4:00	CHEM	338
52	Nathan Burley	Contaminated Soils	2:00-4:00	CHEM	338
53	Jane Ko	Percent Weight of Iron Contained in Tablet Supplements: Comparing a Generic and a Non-Generic Brand	2:00-4:00	CHEM	338

Posters

#	Student	Title	Time	Dept	Class
54	Jeremy Bush Deborah Von Cannon	Clover Creek Population	2:30-3:30	ENVT	350
55	Michael Johnson Erin Wolf	Clover Creek Economics	2:30-3:30	ENVT	350
56	Aimee Boursaw Philip Coburn Leif Dobszinsky	Clover Creek Resources	2:30-3:30	ENVT	350
57	Katie Anderson Penny Beckwith	Clover Creek Land Use	2:30-3:30	ENVT	350
58	Elizabeth Hoffman Kristen Myers	Clover Creek Biology	2:30-3:30	ENVT	350
59	Leslie Kooy Jonathan Payne	Clover Creek Chemistry	2:30-3:30	ENVT	350
60	Willie Painter Tighe Stuart	Clover Creek Geology	2:30-3:30	ENVT	350
61	Jonathan Payne Nicole St. Amand Marie Wroble	The Power of Seismic Surveys to Explore the Juan de Fuca Ridge	2:30-3:30	GEOS	335
62	Alisa Browne Ben Kortlever	Gravity Studies of the Juan de Fuca Ridge	2:30-3:30	GEOS	335
63	Leif Dobszinsky Dan Lingenfelter	Magnetics: Techniques and Studies	2:30-3:30	GEOS	335
64	Kari Akin Melissa Maloney Justin Toney	Plate Tectonics of the Juan de Fuca Ridge	2:30-3:30	GEOS	335
65	Severin Hagen- Lillevik Keriann Pederson Kris Peterson	Geothermal Data and the Juan de Fuca Ridge System	2:30-3:30	GEOS	335
66	Blake Busey	Vitamin C Concentrations in Dietary Supplements and Foods by Titration	2:00-4:00	CHEM	338
67	Sean Collins	Dynamics of a D Peroxiredoxin Glutaredoxin and Thioredoxin Dependent	2:00-4:00	CHEM	405
68	Tara Dowler	Spectrophotometric Determination of Iron in Vitamin Tablets	2:00-4:00	CHEM	338

Posters

#	Student	Title	Time	Dept	Class
69	Theresa Duarte	Iron Content in Canned, Regular, and Organic Spinach	2:00-4:00	CHEM	338
70	Kristen Forseth	Phosphoenolpyruvate Carboxykinase	2:00-4:00	CHEM	405
71	Andrea Gabler	Oxidative Power of Laundry Bleaches	2:00-4:00	CHEM	338
72	Debra George	Human Lactase vs. Human and Bovine Lactose Proteins	2:00-4:00	CHEM	405
73	Christine Gordon	Precision in Vitamin Pills	2:00-4:00	CHEM	338
74	Thomas M. Griffith	What's In Your Sports Drink?	2:00-4:00	CHEM	338
75	Camilla Woodard	Iron Content in Cereal	2:00-4:00	CHEM	338
76	Jim Ching-Mao Hsu	Caffeine Content in Mountain Dew	2:00-4:00	CHEM	338
77	Daniel Jacobsen	Comparison of Omega 3 Fatty Acid Concentrations in Generic Pill vs. Name Brand Pills	2:00-4:00	CHEM	338
78	Jocelyn Jette	Analysis of Zinc in a Dietary Supplement	2:00-4:00	CHEM	338
79	Jeffrey Kensrud	Starbucks Caffeine	2:00-4:00	CHEM	338
80	Hillary Krueger	A Measure of Potassium in Bananas and Their Peels	2:00-4:00	CHEM	338
81	Jon Martinson	ICP-OES Analysis of a Calcium Supplement	2:00-4:00	CHEM	338
82	Allyson Mrachek	Flavonoid Content in Various Food Products	2:00-4:00	CHEM	338
83	Lam Nguyen	Spectral Determination of Myrtenol Using Proton NMR, C13, and COSY	2:00-4:00	CHEM	435
84	Amanda Pokorny	Structural Relation of Redox-Linked Protonation Chemistry to the Iron-Sulfur Protein of the Cytochrome bc1 Complex	2:00-4:00	CHEM	405
85	Paige Sthen	Amount of Iron in Iron Tablets	2:00-4:00	CHEM	338
86	Brandon Stickelmeyer	Weight % of Caffeine in Various Coffee Beans	2:00-4:00	CHEM	338
87	Seth Storby	Analytical Analysis of Caffeine in Energy Drinks	2:00-4:00	CHEM	338
88	Matt Thomas	Determination of the Critical Micelle Concentration for Lithium Dodecyl Sulfate	2:00-4:00	CHEM	344
89	Takashi Tsuchiya	Titration of Rain Around PLU	2:00-4:00	CHEM	338
90	Breanna Vollmar	Do Rockstar Energy Drinks Really Pump You Up?: An Analysis on the Amounts of Taurine in Energy Drinks	2:00-4:00	CHEM	338
91	Michael Wauters	Calcium Determination in an Orange	2:00-4:00	CHEM	338

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Anderson, Katie	F	2:30-3:30		Poster Clover Creek Land Use
Anderson, Trevor	S	11:40-12:05	103	Oral Work Shift Scheduler
Beckwith, Penny	F	2:30-3:30		Poster Clover Creek Land Use
Bellows, Blaise	F	2:00-4:00		Poster Determination of the Amount of Alcohol in Mouthwash
Bennett, Patrick	S	9:20-9:40	102	Oral Mechanisms of Intracellular Transport in Neurons
Berg, Nathan	S	10:45-11:15	103	Oral Circuit Board Design at 10GHz
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Browne, Alisa	F	2:30-3:30		Poster Gravity Studies of the Juan de Fuca Ridge
Browne, Alisa	S	11:00-11:30	109	Oral Relationship of Streamflow to Shallow Groundwater at Lee Vining Creek in Mono Basin, California
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Burley, Nathan	F	2:00-4:00		Poster Contaminated Soils
Busey, Blake	F	2:00-4:00		Poster Vitamin C Concentrations in Dietary Supplements and Foods by Titration
Bush, Jeremy	F	2:30-3:30		Poster Clover Creek Population
Carlson, Angie	F	2:30-3:30		Poster Organic vs. Conventional Mouthcare Products
Christian, Leanna	S	11:30-12:30	220	Oral Multivariate Statistical Analysis: Applications to Tourist Preferences
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Coburn, Philip	S	3:00-3:30	109	Oral	U.S. Drug Policy in Colombia: State Strengthening and Coca
Coffman, Thomas	F	4:25-16:40:00	103	Oral	Gasoline Engine-Powered Minibike
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Cox, Andrea	F	2:30-3:30		Poster	Milk Versus Chocolate in the Fight Against Acne
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DeVilbiss, Bethany	F	2:00-4:00		Poster	Nucleoside Disphosphate Kinase A
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Fay, Kyle	F	5:00-5:10	103	Oral	The Tennis Ball Gun
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Finseth, Eric	S	11:15-11:40	103	Oral	Plug-In-Oriented Design: pGina2
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Nelson, Jacob	S	2:25-2:55	103	Oral	Building E-Commerce Applications with Amazon Web Services
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Patrick, Jessica	F	2:30-3:30		Poster	Water Analysis of E. Coli in Ground Beef
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Wagner, Tim	F	2:30-3:30		Poster	Milk Versus Chocolate in the Fight Against Acne
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Wagner, Tim	F	2:00-4:00		Poster	Solid-State NMR Study of Piscidin 1 Bound to Hydrated Lipid Bilayers
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