Polymers and Coatings Program at Cal Poly
California Polytechnic State University, San Luis Obispo, is one of the 23 campuses of the California State University system. Cal Poly enrolls about 20,000 students and is nationally recognized for the excellence of its programs in architecture, agriculture, engineering, and the sciences. The Polymers and Coatings program, an integral part of the Chemistry and Biochemistry Department of the College of Science and Mathematics, offers both an Undergraduate Concentration and a Masters degree in Polymers and Coatings Science.

Short Course Overview
Cal Poly's winter short course on polymers and coatings brings together academic and industrial experts in the field. The one-week course covers many aspects of coating technology with emphasis on liquid coatings, both waterborne and solvent-based. Participants benefit from discussions of VOC and air quality aspects of coatings by experts in both industry and government regulatory agencies. Participants are expected to have had some exposure to the coatings field along with working knowledge in chemistry and other sciences. The course will convene at 8:00 AM on Monday and end at 12:00 noon on Friday.

Travel and Accommodations
San Luis Obispo is in California’s Central Coast region, 200 miles north of Los Angeles and 230 miles south of San Francisco. Participants who wish to drive from the Los Angeles or San Francisco areas may take Route 101. All major airlines offer services to San Luis Obispo Airport with connecting flights from Los Angeles, San Francisco, and Phoenix, Denver, and Seattle. The San Luis Obispo Chamber of Commerce website (www.visitslo.com) contains information for local hotels. Lodging is not included in the program fee.

Registration and Fees
Course registration fee is $1590 if received on or before January 7, 2019 and $1690 if received on or after January 8, 2019. Participants must register online. Course registration fee covers hard and soft copies of handouts, refreshments, and luncheons for Monday through Thursday.

For more information, contact Dr. Ray Fernando at 805-756-2395 or visit www.wctc.calpoly.edu

TENTATIVE AGENDA

Monday, Feb. 4
• Coating Industry & Formulation Overview
• Resin Technologies (Overview, Solvent, 2K)
• Pigments and Fillers
• Resin Technologies (Waterborne, Opaque Polymers)

Tuesday, Feb. 5
• Film and Formation Curing
• Characterization (MW, Spectroscopy, etc.)
• Advanced Polymerization Methods for Coatings
• Color and Appearance
• Surface Tension and Surfactants

Wednesday, Feb. 6
• Modern Methods of Surface Analysis
• Coating Rheology Fundamentals
• Tour of Facilities

Thursday, Feb. 7
• Polyurethane and UV/Radiation Cure Technology
• Additives and Defects
• Coating Rheology-Applications
• Formulating for the Environment
• VOC/Air Quality-Regulations, Analysis and Measurement

Friday, Feb. 8
• VOC Compliant Resin and Colorant Technologies
• Specialty Filters
• Nanotechnology Applications in Coatings
• Wrap Up and Evaluations
SHORT COURSE INSTRUCTORS

Jonathan Bird (Regional Technical Marketing Manager, Lubrizol Corporation) received his B.S. in Physics from Kent State University in 2006 and his MBA from Ashland University in 2015. At Lubrizol, Jonathan has worked at various technical and marketing positions since 2008.

Gary Dombrowski (Research Fellow, Dow Chemical Company) received his Ph.D. in chemistry from the University of Minnesota in the area of physical organic chemistry. He worked as a postdoctoral research associate at the University of Rochester’s NSF Center for Photo-induced Charge Transfer. In 2000, he became a Synthesis Group Leader within Architectural and Functional Coatings, supporting the development of binders for the decorative paint market.

Raymond Fernando (Professor, California Polytechnic State University) received his Ph.D. in 1986 from North Dakota State University in Polymers and Coatings, emphasizing studies in the coating rheology field. He has fifteen years of industrial experience in coatings, with extensive knowledge in waterborne technology. Since 2002 he has been the occupant of Arthur C. Edwards Endowed Chair in the Department of Chemistry and Biochemistry and the Director of Kenneth N Edwards Western Coatings Technology Center at Cal Poly. He spent 3 years in R&D at Air Products and Chemicals and 12 years at Armstrong World Industries.

Dane Jones (Emeritus Professor, California Polytechnic State University) received his Ph.D. in Physical Chemistry from Stanford University in 1974. He has held research and teaching positions at Uppsala University, the University of Utah, and The University of California, San Diego. He joined Cal Poly faculty in 1976. He was instrumental in developing the Polymers and Coatings program at Cal Poly and was director of the program until 2002. His research interests include spectroscopic analysis of polymers and coatings, and VOC analysis. He is the recipient of Cal Poly’s Distinguished Teacher Award and Los Angeles Coating Society’s Distinguished Service Award.

Daniel Kraiter (Research Associate, Chemours Company) received BS&MS degrees from Polytechnic University of Bucharest, Romania in 1988, in Chemical Technology. He received his Ph.D in Bio-inorganic Chemistry from Duke University, Durham NC in 1998. Daniel’s career in coatings and inks started in 1997 when he was hired by DuPont. His Initial assignment was in Ink Jet Inks R&D division (polymer synthesis, pigment dispersions, ink evaluations). In 2005 he transferred to DuPont Titanium Technologies to work on technology development for new TiO2 pigments. Currently, he is in the Chemours R&D Group working on technology development and product development for new TiO2 grades with a focus on polymer-pigment interactions.

Stuart Lipskin (Key Account Manager, BYK USA Company) graduated from Temple University with a B.A. in Science and an M.B.A. He began his career at the Rohm & Haas, Springhouse, PA laboratories in 1973 and has worked for Air Products and McWhorter in marketing and sales positions. Since 1981, he has been with BYK USA as a Technical Sales Representative, and then a Regional Sales Manager. At BYK USA, he is working with raw material suppliers developing partnerships for growth. He also provides technical sales support to some of the BYK USA distributors. Stuart is the past president of the Philadelphia Paint & Coatings Association.

Patrick Lutz (Technical Sales, EPS Color Corp) received a B.A. and a Ph.D. from Syracuse University in 1964 and 1970, respectively. He held many Technical Service, Market Research and Sales positions with DuPont Pigments and Chemicals Groups over a 25-year span. In 1993, he joined Dunn-Edwards Corporation as the Strategic Project Manager and was the Director of Labs and interfaced with extensively with regulatory agencies dealing with VOC discussions. In 2002, Pat joined EPS as the west coast Technical Sales Representative focusing on architectural resins and colorants. In this position, he has maintained an involvement in VOC discussions with regulators throughout North America.

Jim Macdonald (End Use Manager, BYK-Gardner USA) is Business Line Manager – Industrial paint and coatings applications.

Scott Van Remortel (Manager, Technical Sales, Unimin Specialty Minerals) received a B.S. degree in Polymers and Coatings Technology from Eastern Michigan University in 1992. Scott is an active member of the Industrial Advisory Council for the Polymers and Coatings Program at Cal Poly, San Luis Obispo. In addition, he is a Past President and is the current technical chair of the Piedmont Society for Coatings Technology.

Donald Ricks (Senior Technical Service Chemist, Evonik Industries) graduated Summa Cum Laude with a B. S. degree in Chemistry from North Carolina Central University. He works at the North American Technical Competence Center and laboratory with responsibility for the support of the specialty resins, coatings, and ink areas within Tego division. Don’s primary responsibility is the Architectural interior and exterior market. Prior to joining Tego in 2003, Don was a Coating Technician at Reichhold for the industrial and architectural coatings business line. He has many varied interests and loves to spend time with his family.

Erik Sapper (Assistant Professor, California Polytechnic State University) received his PhD in Coatings and Polymeric Materials from North Dakota State University in 2013. He has a BS in Chemistry (2006) and MS in Polymers and Coatings Science (2007) from California Polytechnic State University. Since 2010 he has worked in the Chemical Technology division of Boeing Research & Technology, taking on various principal investigator and project manager roles. Prior to joining Cal Poly in 2016, Dr. Sapper was located in St. Louis, Missouri, where he lead teams at multiple sites working on polymer synthesis, coatings formulation, service lifetime prediction, and test method development.

Myron Shaffer (Director of Product and Technology Services, Covestro Company) received his BS in Biology from Mt. Vernon Nazarene University, followed by a Ph.D. in Organic Chemistry from The Ohio State University. Myron began his career at Bayer (then Mobay) in the Technical Marketing group within Coatings in 1988. In 1994 he transferred to the Coatings Research Group where he primarily worked on aliphatic isocyanate resin development. In 2002 Myron became a Principal Scientist and Group Leader within the Research organization. In 2006 Myron was promoted to Manager of Product Performance Management within CAS. Most recently he became the Director of the Product and Technical Service organization in the Application and Technology Development group of the CAS business unit.

Robert Wendoll (Director of Environmental Affairs, Dunn-Edwards Corporation) is a graduate of the University of California at Berkeley (BA in Architecture & Art, 1971). He has been with Dunn-Edwards for over twenty-five years, out of a total of over thirty years in the paint and coatings industry. His current duties include monitoring environmental, health & safety laws and regulations, determining specific applicability to Dunn-Edwards, and designing and implementing compliance measures and programs.

Shanju Zhang (Associate Professor, California Polytechnic State University) received his Ph.D. in Polymer Chemistry and Physics from Jilin University, China in 1998. Prior to joining the Cal Poly faculty in 2011, he held research positions at Yale University, Georgia Tech, Cambridge University, Technical University of Berlin and Chinese Academy of Sciences. His research interests include synthesis, structural analysis and processing of polymers, liquid crystals and nanomaterials. He is the recipient of the Alexander von Humboldt Fellowship.