Cal Poly - Construction Management Department
Faculty Areas/Topics of Interest
CM460 – Senior Project
Updated – November 2019

NOTE: This list is not intended to be complete for any particular faculty, nor is it intended to be limiting (in any way) to students when selecting an area of research interest or senior project topic. This list is ONLY intended to give some basic areas of interest which may provide students with some assistance in selecting a senior project technical advisor – Subject Matter Expert (SME).

Al Hauck:
- Value Engineering
- Engineering Economics
- Productivity Measurement
- Productivity Improvement
- Commercial Building Methods
- Commercial Building Materials
- Commercial Building Assemblies
- Residential Construction Materials
- Residential Construction Methods
- Residential Construction Assemblies
- Curriculum
- Accreditation
- Project Management
- Certified: AIC – Certified Prof. Constructor

Phil Barlow:
- Productivity
- Risk and Risk Management
- Jobsite Management
- Jobsite Documentation & Controls
- Quality (assurance and control)
- Site Organization & Development
- Estimating & Bidding
- Scheduling
- LEAN Construction
- Prefabrication
- Constructability Review
- SWPPP & CESSWI
- Commercial Construction
- Commercial Project & Site Management
- Document Control
- Contract Documents
- Safety
- Certified: DBIA – Design-Build Professional
- Certified: GBCI – LEED AP
- Certified: AIC – Certified Prof. Constructor
- Certified: AACE – Certified Cost Consultant
- California Contractor License “B”

Scott Kelting:
- Residential
- Education
- Educational Facilities
- Real Estate
- Robotics
- Construction Methods
- Construction Assemblies
- Quality (assurance and control)
- Safety
- LEED, Green Building, Sustainability
- Housing
- Decision Making
- Emotional Intelligence
- Storm Water Pollution Prevention Plan
- Best Management Practices
- Building Information Modeling
- LEAN Construction
- Energy Modeling
- Modular Construction
- Prefabrication
- LEEM
- Disaster Recovery
- Water Conservation/Drinking Water
- Indoor Environmental Quality
- Manufacturing
- Facilities Management
**Lonny Simonian:**
- Construction Labor Productivity
- Lean Design and Construction
- Risk Assessment and Management
- Jobsite Management
- Built in Quality
- Project Fee Structure
- MEP Preassembly
- MEP Building Methods
- MEP Building Materials
- MEP Building Assemblies
- Utility Design and Construction
- Energy Management and Control
- BIM for Specialty Construction
- Specialty Design and Construction
- Project Management
- Public Agency Design and Construction
- Project Delivery
- Earned Value Analysis
- Process Design and Construction
- Industrial Design and Construction
- Agile Project Management

**Barry Jones:**
- Public Private Partnerships
- Integrated Project Delivery and other AEC team collaboration strategies
- Civil Engineering Infrastructure Project
- Environmental, Health and Safety advances on construction sites assisted by BIM and Virtual Design to interrogate
- Environmental Management
- International Construction method/material
- Construction in developing economies
- Construction Education in 3rd world countries
- Construction and Development Economics
- Total Quality Management strategies
- Heavy Equipment and Methods - new developments.
- Planning and Control tools
- Financial Management and tracking of project profitability
- Sustainable Infrastructure
- Sustainability, society and the environment synergies
- Green Construction

**Elbert Speidel:**
- VDC (BIM)
- LEAN Construction
- Polymers
- Sustainability
- Integrated Project Delivery
- Eco-Design
- Construction Safety
- Estimating
- Scheduling

**Greg Starzyk:**
- Risk and Risk Management
- Construction Law
- Construction Contract Documents
- Claims and Dispute Resolution
- Copyrights and Trade Secrets
- Construction Insurance
- Bonding and Sureties
- Mediation and Arbitration
- Dispute Resolution
- Construction Accounting
- Process Plant Construction
- Modular Construction
- Design-Build
- Integrated Project Delivery
- LEAN Construction
- Offsite Fabrication
Paul Weber
• AutoCad
• Architectural Design
• Revit
• Building Codes

Paul Redden
• Project Management
• International Construction
• Industrial Construction
• Value Engineering
• Estimating
• Economic Evaluations
• Environmental Remediation
• Craft Productivity
• Risk Analysis and Management
• Stakeholder Management
• Constructability Reviews
• Behavior Change management
• Road Mapping
• Strategic Decision Mapping
• Decision Analysis
• Project Production Management

Stacy Kolegraff
• Residential construction practices
• Construction cost control and accounting
• Facilities maintenance and management
• Emotional Intelligence
• Storm water pollution prevention plan (SWPPP)
• Social Justice and Built Environment
• Strategic Planning and Decision Making
• Human resource management
• Quality (assurance and control)
• Built Environment Impacts
• Diversity and Inclusion
• Technology Implementation

Dan Knight
• Construction Law
• Deconstructive Testing and Methods
• Construction Economics
• Forensic Analysis of Cost Failures
• Heavy Lifting Methods
• Dispute Resolution
• Structure Relocation and Movement
• Real Estate and Real Property Development
• Construction Accounting
• Construction Regulation
• Construction Litigation

Jason Hailer
• VDC – Field Deployment
• Sustainability
• Facilities / Turnover
• Design for Maintainability
• CPC/DBIA
• Interpersonal Skills Deployment in Curriculum
• High Performance Building Design/Construction
• Target Value Design
• Lean Practices (Manufacturing Influence)
• Project Controls (SIPS, Last Planner)
• Alternate Project Delivery Methods (D-B, IPD, CMAR)
• Project Decision via Net Present Value
Andrew Kline
- Project Scheduling, Pull-Planning/Lean Approaches
- Multi-family
- Project Technology Solutions
- Mixed use
- VDC
- Concrete Estimating/Means&Methods

Ed Boucher
- Heavy Industrial Construction
  - Nuclear
  - Refinery
  - Chemical
- Rigging & Load Handling
- Heavy Civil
- OSHA Regulations
- Elevated Work Structures
- Collective Bargaining Units
- Building Codes
- Job Site Management
- Project Management

Michael Burns
- Program Management
- Risk Management
- Mega Projects
- Design-Build

Joe Cleary
- Leadership
- Strategic Planning
- Building Science
- Net-Zero Energy Buildings
- Energy Management
- High Performance Buildings
- Sustainability
- Infrastructure
- City/Regional Planning
- Facility Management
- Net Zero Districts
- Building Occupant Health

- Project Turnover
- Punchlist Process
- Green building
- Site planning and Logistics
- Residential means and methods
- Commercial means and methods
- Management & Leadership

- Construction Materials
- Commercial Building Methods
- Structural Steel
- Trenching & Excavation
- Prefabrication
- Storm Water Prevention Plan
- ISNetworld
- SMARTS
- Construction Methods
- Job Site Management
- Stakeholder Management
- Constructability Reviews

- Integrated Project Delivery
- Diversity and Inclusion
- Collaboration

- Emerging Technologies
- Project Management
- Site Supervision
- Construction Geomatics
- Site Logistics
- Project Controls
- Labor Relations/Collective Bargaining
- Integrated Project Delivery
- Large complex projects
- Develop-design-build
- Modularization
- Construction Education
Bryan Knakiewicz:
- BIM
- CAD (AutoCAD, Revit, Civil 3D, Bentley Inroads, Solidworks)
- Construction Management and Scheduling
- Construction Materials (Concrete, Asphalt, Glass, Steel)
- Engineering Economy
- Estimating
- FE Element Analysis
- Green Construction
- Heavy Civil
- Highway and Transportation Engineering

Eric Brinkman
- Prefabrication / Modular Construction
- Residential Construction
- Real Estate and Real Property Development
- Construction Materials and Methods
- Sustainability/Green Building/Net Zero/LEED

Jeong Woo
- Prefabr Estimating
- Scheduling
- Design-build
- Project management
- International projects
- IPD
- Lean Construction

- Infrastructure
- Pavement Design/Performance
- Project Management
- Property Management
- Site Planning/Design
- Soil Mechanics and Foundations
- Structural Analysis/Design (Steel, Concrete)
- Surveying
- Sustainability (Materials, Systems, Site Design, Infrastructure)
- Transportation Planning

- Facilities Management
- Best Management Practices
- Energy Management
- Lean Design and Construction
- Leadership and Management

- VDC/BIM
- Construction information technologies
- Smart buildings/smart cities
- Industry 4.0 in construction
- Construction software startups
- Facilities Management
- Curriculum development