

THREE RIVERS COMMUNITY COLLEGE
CONTRACTS & SPECIFICATIONS ARC K221
Tuesday's 6:30 PM – 9:15 PM (First class August 27, 2019)
Lecture Hall B-125 ~~D-104~~

Instructor: Sam Gavish ▪ ARCHITECT, Cell #: (917) 751-8717, email sgavish@trcc.commnet.edu

Office/Hrs: ~~D-205E~~, 5:00 – 6:15 PM Tuesday's

POS Map: 3rd Semester, Credits: 3, Hours: 3, Recommended Co-requisite: ARC 135/L

Method of Evaluation: Attendance/participation 50%, Exams 30%, Project 20%

Objective: This course introduces the student to the comprehensive documentation necessary for a complete implementation of a design concept based on an established program. The required documents include requests for proposals and contractual agreements with professional consultants and contractors, working drawings, specifications and project manual. In addition, the course introduces the student to a typical operation of an architectural office during the design and construction phases. It guides the student through the process of bidding, bids' evaluation, negotiations and award of the contract for construction. The course ends with a detailed description of the role and activities of the design and construction teams during the contract administration phase. This final phase concludes with the successful completion of the construction work and the project closeout.

Educational Resources: No textbook is assigned, there will be Instructor-provided educational resources.

Educational Outcomes:

- Understand the parts and role(s) of Construction Documents including:
 - Drawings, Contracts, and Specifications;
- Develop a working knowledge of the integration of these documents and their hierarchy;
- Learn to apply research methods and resulting judgment in simulated situational conflict;
- Develop a thorough understanding of various project players and delivery structures;
- Master the parts and roles of the primary Construction Documents:
 - Construction Drawings
 - Project Manual Bidding Documents
 - Project Manual Contract Forms
 - Project Manual General Conditions
 - Project manual Specifications (16 Division CSI Format)

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SYLLABUS

Unit 1: Introduction & overview

- Principles of a legally binding contract.
- Contracts format (written/illustrated, oral).
- Jurisdiction determination.
- Penalty/bonus, liquidated and consequential (special) damages.
- Substantial completion – “Time is of the Essence”.
- Dispute resolution – mediation, arbitration, litigation.
- Compensation to the prevailing party.
- Architectural contractual documentation/general requirements.

Unit 2: Request for Proposal (RFP) – Base building consultants Design Agreements (service, deliverables, general conditions & payment schedule)

- Architectural.
- Geotechnical engineering.
- Structural engineering.
- MEP engineering.
- Conveyance systems.
- DOB/LPC expediting.

Unit 3: Request for Proposal (RFP) – Other consultants Design Agreements (service, deliverables, general conditions & payment schedule)

- Interior design (commissions on purchases).
- Decoration/Furnishing.
- Landscape design.
- Information Technology.
- Audio-Visual.
- Security.

Unit 4: The Working Drawings (review sample set)

- Plan view of architectural elements.
- Plan view of structural elements.
- Plan view of mechanical systems.
- Plan view of electrical systems and reflected ceilings layout.

Unit 5: The Working Drawings (review sample set)

- Elevation view of architectural elements.
- Elevation view of the exterior envelope.
- Elevation view of interior design elements.

Unit 6: The Working Drawings (review sample set)

- Cross sections.
- Longitudinal sections.
- Section Details and reflected ceiling plans.
- Schedules and tables.
- Notation/general conditions.

Unit 7: Project Deliverables (review sample set)

- Final design approvals (Architectural Review Board, Community Board).
- Working drawings.
- Addenda.
- Alternates.
- Project Manual (bulletins, catalogue cuts, schedules, photographs, SK's).
- CSI Specifications (Divisions 1 through 26/48).

Unit 8: The Business Environment

- Marketing and business development.
- Firm Organization (standard operation vs. studios).
- Office tasks vs. field tasks.
- Coordination with consultants (direct/indirect contractual relationship).
- Liabilities - Errors and Omissions protection.

- Administration and human resources.
- Fees & Billing (lump sum, hourly, percentage of construction).

MID-TERM EXAM

Unit 9: **Bidding Procedures**

- Bid Form and supporting documents.
- General Contracting/Construction Management/Design Build (pro & con).
- Stipulated Sum, Cost plus fee with a Guaranteed Maximum Price (GMP).
- Time & Material (T&M) without a GMP, CM with savings sharing
- Pre-bid conference.
- Site visits by bidders.
- Bids' leveling and analysis.
- Value engineering.
- Bid bond, Performance Bond for Material and Labor.
- Contract negotiations and award.

Unit 10: **Post bidding/Award procedures**

- Budget confirmation (hard and soft costs).
- Owner/Contractor contract for construction (e.g. A104-2017/Abbreviated version – construction work of limited scope).
- Subcontractors' buyout.
- Project directory.
- Contract General and Supplementary Conditions review.
- Contractors' COI's (Certificate of Insurance).
- Contractors' mobilization and deposit payments.

Unit 11: **Contract Administration**

- Environmental surveys (Hazardous materials).
- Hazardous material abatement (Asbestos, Lead, Mold, underground contamination).
- Building permit.
- Preparation of shop drawings and submittals for review and approval.
- Project schedule (CPM method), penalty/bonus for late/early completion

Unit 12: Contract Administration

- Site rules and regulations.
- Site safety program (OSHA regulations).
- General contractor/design team project coordination meetings.
- Subcontractors/vendors' site coordination meetings.

Unit 13: Contract Administration

- Shop Drawings, Submittals, Bulletins approvals (shop drawings failure - Hyatt Regency Kansas City, MO. July 17, 1981).
- Quality Control & Management.
- Schedule and Budget Control.

Unit 14: Contract Administration

- Requisition for Payments AIA G702/G703-Continuation sheet.
- Progress Payments.
- Partial Lien waivers.
- Change orders (Owner's generated, field conditions, errors & omissions).

Unit 15: Contract Administration

- Punch List.
- Final Payment.
- Final Lien Waivers.
- Contract Closing (sign-offs, C of O, As built Drawings).

Unit 16: Contract Administration

- Summary Review.
- Case-Study Discussion.

FINAL EXAM