



AECM Value Based Design Course:

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This course will begin with an in-depth exploration of the fundamentals of project values, incentives and motivations and the diverse sometimes conflicting perspectives of a project's stakeholders. It will be built around the evaluation of Value Based Design (VBD) in three case study projects from the Pittsburgh area. The projects will offer examples of the influential power of a project's design and construction team to address the needs of both public and private stakeholders. These case studies will consist of different scales and complexities in order to demonstrate the importance of the VBD concept in both large and small facilities.

The students will be tasked with examining the definitions of each stakeholder's sense of tangible and intangible project values and debate the various positions of each stakeholder in each case study. Class assignments will explore the incentives and motivations of each stakeholder and the importance of those informing the quality, budget, schedule, sustainability and scope of every project. Thereafter discussions will hone in on the challenges involved in documenting and incorporating those values into the ethos of the project delivery team thinking from design conception to construction completion.

Design value will be assessed in terms of how it can be used to address short term and long term objectives of the owner in evaluating everything from speed to market of the project as a product to life cycle and operating costs, and finally resale and terminal value of the project. The class will touch upon the financial sensitivities that might be perceived as adversely challenging the VBD concept. The class will be encouraged to discuss the best methods of combining creative thinking with construction management to leverage Value Based Design. Thus advancing the idea of balancing the principles of Return on Investment (ROI) with Return on Design (ROD).

Elemental examples of the End User's potential benefits from VBD:

- Business Productivity Enhancement
- Profitability Improvement
- Employee retention
- Brand Image Enhancement
- Community Image Enhancement
- Security Enhancement
- Work Place Culture endorsement
- Sustainability Commitment
- Community Inclusion and Engagement
- Customer Value Alignment
- Building Comfort and Health

The intent will be to elevate the student's understanding of the importance of Value Based Design regardless of the project type or delivery method, eg: design-bid, design-build, 3P, etc.... The student should finish the course with a firm grasp on the roles of each project stakeholder in a range of small to large construction projects. The class will aim to develop a solid understanding and familiarity with the VBD methods and opportunities that the entire project delivery team can employ in successfully executing a project using Value Based Design.

There will be weekly research assignments on the key aspects of Value Based Design and its relevance to construction management. The classroom discussion will draw on case studies to demonstrate the wholistic potential of design thinking that is focused on value. At the end of the semester the students will be required to produce a comprehensive analytical report for their final grade. The report will evaluate the impact of Value Based Design on an actual completed project of their choice. Students will be required to gather post occupancy data and results from the project's stakeholders.

Class participation and attendance is required and will be factored into each student's final grade.

The course textbook:

"Added Value in Design and Construction" authors: Allan Ashworth and Keith Hogg, published by Pearson Education Limited

Suggested reading:

"Problem Seeking: An Architectural Programming Primer 5th Edition" authors: William M. Pena and Steven A. Parshall

"Start with Why: How Great Leaders Inspire Everyone to Take Action" author Simon Sinek