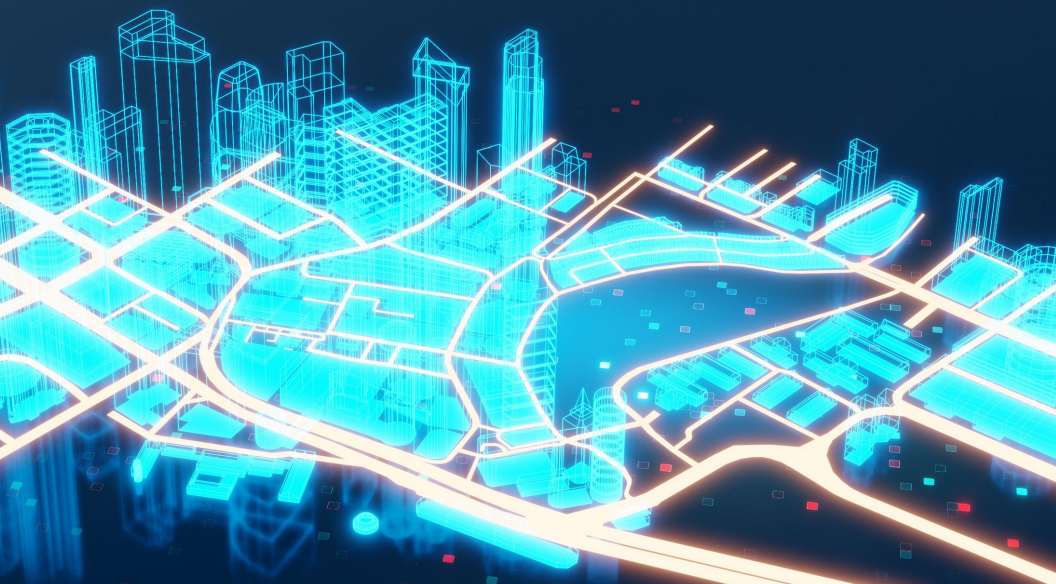


VIRTUAL DESIGN & CONSTRUCTION PROFESSIONAL PROGRAM



Nine Core
Modules of Self-
paced Learning



Online Knowledge
Assessments



Expert
Instruction



Professional
Practicum



Project Progress
Check-Ins



Integration
Workshop

“
VDC showed me how to
reduce design and
construction coordination
risk dramatically and
meet project milestones
reliably and on budget.

- **Contractor**
”

Delivered by

strategic
buildinginnovation



In collaboration with

Stanford

Center for Professional Development

Technological innovation is transforming the AEC industry. Sustainable success depends on smart practices. Since 2008, the Stanford Center for Integrated Facility Engineering (CIFE) has offered a VDC Certification Program to teach AEC Industry professionals how to effectively obtain a high value for their projects and businesses. This world-class program is now offered ONLINE and supported by VDC experts at SBI. Learn how to design, construct, and deliver buildings in a manner that optimizes the cost, schedule, and quality of the work.



Use collaborative planning, management, and project execution methods to optimize success of design and construction projects.



Establish vision, strategy, and implementation roadmap to realize business and project objectives.



Apply VDC on real-world projects.



Leverage BIM as part of a broader approach integrating visualization, simulation, and whole-team collaboration to maximize project outcomes.





This program includes online content for a self-paced learning, and assessment questions and exercises at the end of each online course section to review learned knowledge. This program is led by Stanford Professor Martin Fischer, Director of the Center for Integrated Facility Engineering, part of the Stanford School of Engineering. Strategic Building Innovations (SBI) has been collaborating with Stanford for many years and has trained hundreds of professionals from some of the leading builders in the industry.

Course Components (see page 3 for details)	Self-paced Online Learning	SB-lead In-depth Practicum/ Learning Program	Stanford Faculty Enhanced Program
Nine Core Modules of Self-paced Learning With Online Knowledge Assessments	●	●	●
Expert Instruction		●	●
Project Progress Check-ins		●	●
Professional Practicum		●	● ●
Integration Workshop		●	● ●
Option SBI Courses (see Page 6 for details)	●	●	●
Stanford (SCPD) Record / Certification	●	●	★

● Stanford Faculty

● SBI Instructors

● Record of Completion

★ Certificate of Completion

COURSE COMPONENTS



NINE CORE MODULES OF SELF-PACED LEARNING WITH ONLINE KNOWLEDGE ASSESSMENTS (See Page 4 for syllabus)

Participants will have full access to approximately 14 hours worth of online content for a self-paced learning. Approximately 5 hours worth of assessment questions and exercises are available during and at the end of each online course section to review learned knowledge. See Nine Core Modules for details.

I learned that we aren't as precise as we need to be in defining project objectives, or as optimal in our strategy for engaging our design and engineering partners.

-Project Executive

EXPERT INSTRUCTION

Participants will engage in in-person and/or virtual coaching sessions with instructors on applying VDC, use related software, and project evaluations.



PROFESSIONAL PRACTICUM

Participants will embark on a practicum to explore in-depth practical implementation of VDC in their areas of work.

PROJECT PROGRESS CHECK-INS

Participants will share their progress through monthly reporting. Instructors and fellow participants will provide feedback and advice in each check-in session.



INTEGRATION WORKSHOP

Participants share their VDC implementation experience, results, learning points and insights gained during the implementation period. Instructors will provide guidance for the participants to plan VDC direction for the company and future projects

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NINE CORE MODULES

Module	Course Topics	Course Descriptions
1	Course Introduction	This course features real-world examples to provide relevant examples of the concepts. Welcome video: 2 mins
2	VDC Framework Overview	This module introduces the VDC Framework with case studies that demonstrate successfully delivered projects. Video: 2.5 hours Exercises: 45 mins
3	Metrics	This module introduces metrics, the framework, and case studies on managing metrics. Video: 2 hours Exercises: 45 mins
4	Integrated Project Delivery (IPD)	This module introduces IPD and the simple framework for a high performing building and integrated process. Video: 1 hour Exercises: 30 mins
5	Production Organization Process (POP) Matrix	This module introduces POP examples, how to use the POP matrix, and how POP models are connected to cost, income and VDC. Video: 1 hour Exercises: 30 mins
6	Integrated Concurrent Engineering (ICE)	This module introduces the concept of reciprocity through ICE sessions (the Big Room), ICE session metrics and controllable factors. Video: 3 hours Exercises: 30 mins
7	Building Information Modelling (BIM)	This module introduces BIM and its value in DPR's five levels of organization perspectives, BIM related production metrics and controllable factors. Video: 3.5 hours Exercises: 30 mins
8	Project Production Management (PPM)	This module introduces production systems, variabilities and how to manage them, the difference between process, plan and schedule, metrics and controllable factors. Video: 2 hours Exercises: 30 mins
9	VDC Implementation	This module is a recap of VDC and how it can be strategically beneficial for a company and common implementation challenges. Video: 2 hours Exercises: 10 mins

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OPTIONAL SBI COURSES

1

KEY PERFORMANCE INDICATORS

This module explains how goals and objectives can be tracked and evaluated by using quantifiable measures.



2

OPENBIM

This module introduces BIM collaboration using open standards and workflows.



3

OPENBIM/GIS

This module introduces examples and use cases of openBIM/GIS servers, the different solutions in the market for integrating BIM and GIS, along with their limitations, and addresses the challenges and issues of converting BIM data to GIS data (and vice versa).



4

SMARTER CITIES

This module explains how technology can be used to collect data at an urban scale, and how insights gained can be used to efficiently manage resources and improve city operations.



5

DIGITAL TWIN / BIM FOR FM

This module introduces the digital representation of a physical building, and how its real-time data can span the entire project and building lifecycle.



6

ADVANCED VISUALIZATION

This module introduces the conceptual background of Virtual Reality (VR), Augmented Reality (AR), and Mixed Reality (MR) and the industry applications, best practices, and limitations of VR/AR/MR



7

SUSTAINABILITY AND STEWARDSHIP

This module discusses responsible planning and management of resources in the built environment.



8

BIM EXECUTION PLANNING / LEVEL OF DEVELOPMENT

The module explains how the BIM Execution Plan (BEP) defines BIM uses, and how to apply Level of Development (LOD) to specify model requirements.



9

4D TRAINING

This module introduces basic skills to simulate project schedules with 4D BIM, analyze project progress and impacts of changes, and facilitate better coordination.



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Email us to learn more: sbi@sbi.international

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