



Advanced CAD-Architectural-19336

DFTG-2331

RT 2022 Section 0001 3 Credits 08/23/2021 to 12/12/2021 Modified 08/10/2021

Course Meetings

Course Modality

Online

Meeting Days

TBA

Meeting Times

TBA

Meeting Location

Online Meeting

Welcome and Instructor Information

Welcome to DFTG 2331: Advanced Technologies in Architectural Design and Drafting. I would like to provide you an excitement this semester experiencing creativity and design technology of architecture. We will learn BIM process with the use of Revit software and I will be with you during this semester to guide your success.

Instructor: Dr. Iwao Takahashi

Email: iwao.takahashi@hccs.edu

What's Exciting About This Course

This course is exciting because you will have opportunity to develop Revit and Building Design Skills.

My Personal Welcome

Welcome to DFTG 2331. Let's develop your design and Revit proficiency. Lecture videos are very helpful and you can reach me @ Webex Personal Room. Let's find out how you can achieve your goals.

Preferred Method of Contact

Email: iwao.takahashi@hccs.edu

Office Hours

Tuesday, 10:30 AM to 12:30 PM, Webex Personal Room

Please make your time appointment by email at first at least one day before planning meeting time. Each student has 30 minutes to meet with me. If your meeting time is not possible during the office time, please let me know your wishing time and date. We might find the possible schedule.

Course Overview

Course Description

Placeholder for the Course Description - Copy from course catalog

Requisites

Placeholder for the Requisites - Copy from course catalog

Department Website

https://

Core Curriculum Objectives (CCOs)

Add Content Here

Student Learning Outcomes and Objectives

Add Content Here

Departmental Practices and Procedures

Department Specific Instructor and Student Responsibilities

Add Content Here

Program-Specific Student Success Information

Add Content Here

Instructional Materials and Resources

Instructional Materials

The [HCC Online Bookstore \(https://hccs.bncollege.com/shop/hccs-central/page/find-textbooks\)](https://hccs.bncollege.com/shop/hccs-central/page/find-textbooks) provides searchable information on textbooks for all courses. Check with your instructor before purchasing textbooks because the book might be included in your course fees.

Textbook Information

	<p>Required Textbook:</p> <p>The Aubin Academy Revit Essentials For Architecture: Covers Version 2021 And Beyond.</p> <p>Paul Aubin</p> <p>ISBN-13: 978-0-578-73106-3</p>
	<p>Recommended Course Textbook</p> <p>The Aubin Academy Revit MEP 2015, Author: Paul F Aubin, Darryl McClelland, and Martin Schmid</p> <p>ISBN-13: 978-1500435431</p>

Temporary Free Access to E-Book

TBA

Other Instructional Resources

Courseware

Course Software

Autodesk Revit 2021 or Revit 2022, Student Free software is available from Autodesk Website at:

<http://www.autodesk.com/education/free-software/all>.

Course Resources

Students are recommended to use the following recourses:

Sustainable Building Design, <http://sustainabilityworkshop.autodesk.com/>

✓ Course Requirements

Assignments, Exams, and Activities

Type	Weight	Topic	Notes
Laboratory work	50%	Commercial Green Building	<p>Commercial Green Building for Architecture, MEP, and Structure. Design process and procedure must be appropriately implemented. Which are programming, schematic design, design development, and construction document state. Each step's submission must be made within set schedule for the course.</p> <p>Virtual Reality Video presentation and Aural Presentation by online system are required.</p>
Energy Analysis	10%	Whole Building Energy Analysis and Peak Load Analysis	<p>Whole Building Energy Analysis is required using Revit Analyze and Autodesk Insight to determine the optimized plan to ensure energy efficient building (Green Building) design during the schematic design stage. Based on the result of analysis, a student need to improve, revise original schematic design.</p> <p>Peak load analysis is required to use Revit Analyze to determine Peak load for air conditioning system after finishing Preliminary Design. The created report must be shown in the Green Building Project file.</p>

Type	Weight	Topic	Notes
Essay	10%	Sustainable Design Essay	This 1 or 2 pages essay is about your green building design you concerned and implemented for your design. Subject is strictly related your design work that you used. Therefore, your essay is not general idea of sustainable design. Citation is needed if you use idea or sentences of other people, website, and any other resources.
Professionalism	10%	Class participation and Professionalism	Demonstration of professionalism through course activities, online discussions, and participations to the course work.
Exams/Quizzes	20%	Revit skills and Green Building design related topics.	Demonstration of knowledge and skills of Revit software through mid-term and final examination. The following knowledges and skills will be tested: <ul style="list-style-type: none"> • Revit operation skills • Green Building Design related issues (such as energy analysis, human comfort, and Building Code & Energy Conservation Code) • Others specified during the semester

Grading Formula

Grade	Range	Notes
A	90.00 to 100	
B	80.00 to 89.99	
C	70.00 to 79.99	
D	60.00 to 69.00	
F	Less than 60	

* Instructor's Practices and Procedures

Incomplete Policy

In order to receive a grade of Incomplete ("I"), a student must have completed at least 85% of the work in the course. In all cases, the instructor reserves the right to decline a student's request to receive a grade of Incomplete.

Missed Assignments/Make-Up Policy

Insert your make-up policy for course work other than the departmental final exam. It is acceptable to have a "no makeups" for exams if you drop the lowest exam. You may also allow makeups accompanied by a late-work penalty. You might consider requiring documentation of an emergency to allow a make up. Please also clearly state that a make-up exam is not a retake. That is, make-up exams are allowed only for missed exams. You are responsible for proctoring make-up exams if you allow them.

Academic Integrity

Students are responsible for conducting themselves with honor and integrity in fulfilling course requirements. College System Officials may initiate penalties and/or disciplinary proceedings against a student accused of scholastic dishonesty.

☛ "Scholastic dishonesty" includes, but is not limited to, cheating on a test, plagiarism, and collusion.

☛ "Cheating" on a test includes:

- Copying from another student's test paper;
- Using materials during a test that are not authorized by the person giving the test;
- Collaborating with another student during a test without authority;

- Knowingly using, buying, selling, stealing, transporting, or soliciting in whole or part the contents of an un-administered test;
- Bribing another person to obtain a test that is administered.

☛ "Plagiarism" means the misuse of another's work and the deliberate incorporation of that work into work you offer for credit.

☛ "Collusion" means the unauthorized collaboration with another person in preparing work offered for credit.

Determination of scholastic dishonesty will be at the discretion of the instructor. Here's the link to the HCC information about academic integrity (Scholastic Dishonesty and Violation of Academic Scholastic Dishonesty and Grievance):

<http://www.hccs.edu/about-hcc/procedures/student-rights-policies--procedures/student-procedures/>

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<https://www.hccs.edu/about-hcc/procedures/student-rights-policies--procedures/student-procedures/>
[\(https://www.hccs.edu/about-hcc/procedures/student-rights-policies--procedures/student-procedures/\)](https://www.hccs.edu/about-hcc/procedures/student-rights-policies--procedures/student-procedures/)

Attendance Procedures

You are expected to attend all lecture classes and labs. You are also responsible for all materials covered in either lecture or lab. In the case of your absence, you must contact the instructor to obtain make-up assignments or arrange make-up testing, either of which can be distributed at the instructor's discretion.

Class attendance is checked daily. You may be dropped from the class and get an F grade if you are absent more than 12.5% of the instruction hours (lecture and lab). For example: A 12.5% of 96-hour course, meeting twice per week for 3 hours per class meeting equals 12 hours. If you are absent more than 4 class meetings, you may drop.

Student Conduct

Students are responsible for knowing and obeying the HCC rules such as maintaining high standards of academic integrity, respecting the rights of others. A student who violates these rules, whether on or off campus or on-line, will be subject to adjudication and potential disciplinary action in accordance with the Student Handbook. Please carefully read and consider the repeater policy in the Student Handbook <https://www.hccs.edu/resources-for/current-students/student-handbook/>

Instructor's Course-Specific Information

My teaching philosophy is emphasized on "Analytical". I focus on the relationship of Descriptive Geometry as an "analytical" graphic visualization process. This helps student to gain a conceptual understanding of how to analyze and represent 3-D objects in 2-D space for the purpose of designing, making and extracting.

Devices

Students are required to use Revit 2021 or Revit 2021, and Enscape software to make Virtual Reality Video. Therefore, students need to use required to use computer with sufficient system. Please check each software's required system condition.

Faculty Statement about Student Success

Revit software is the de facto industry software. Your completion of this course and further development in Revit skills and knowledge will guide your success in the design and construction fields.

Faculty-Specific Information Regarding Canvas

This course section will use Canvas (<https://eagleonline.hccs.edu> (<https://eagleonline.hccs.edu>)) to supplement in-class assignments, exams, and activities.

HCCS Open Lab locations may be used to access the Internet and Canvas. For best performance, Canvas should be used on the current or first previous major release of Chrome, Firefox, Edge, or Safari. Because it's built using web standards, Canvas runs on Windows, Mac, Linux, iOS, Android, or any other device with a modern web browser.

Canvas only requires an operating system that can run the latest compatible web browsers. Your computer operating system should be kept up to date with the latest recommended security updates and upgrades.

Social Justice Statement

Houston Community College is committed to furthering the cause of social justice in our community and beyond. HCC does not discriminate on the basis of race, color, religion, sex, gender identity and expression, national origin, age, disability, sexual orientation, or veteran status. I fully support that commitment and, as such, will work to maintain a positive learning environment based upon open communication, mutual respect, and non-discrimination. In this course, we share in the creation and maintenance of a positive and safe learning environment. Part of this process includes acknowledging and embracing the differences among us in order to establish and reinforce that each one of us matters. I appreciate your suggestions about how to best maintain this environment of respect. If you experience any type of discrimination, please contact me and/or the Office of Institutional Equity at 713-718-8271.

HCC Policies and Information

HCC Grading System

HCC uses the following standard grading system:

Grade	Grade Interpretation	Grade Points
A	Excellent (90-100)	4
B	Good (80-89)	3
C	Fair (70-79)	2
D	Passing (60-69), except in developmental courses.	1
F	Failing (59 and below)	0
FX	Failing due to non-attendance	0
W	Withdrawn	0
I	Incomplete	0
AUD	Audit	0
IP	In Progress. Given only in certain developmental courses. A student must re-enroll to receive credit.	0
COM	Completed. Given in non-credit and continuing education courses.	0

Link to Policies in Student Handbook

Here's the link to the HCC Student Handbook <https://www.hccs.edu/resources-for/current-students/student-handbook/>

<https://www.hccs.edu/resources-for/current-students/student-handbook/>) In it you will find information about the following:

- Academic Information
- Academic Support
- Attendance, Repeating Courses, and Withdrawal
- Career Planning and Job Search
- Childcare
- disAbility Support Services
- Electronic Devices
- Equal Educational Opportunity
- Financial Aid TV (FATV)
- General Student Complaints
- Grade of FX
- Incomplete Grades
- International Student Services
- Health Awareness
- Libraries/Bookstore
- Police Services & Campus Safety
- Student Life at HCC
- Student Rights and Responsibilities
- Student Services
- Testing
- Transfer Planning
- Veteran Services

Link to HCC Academic Integrity Statement

<https://www.hccs.edu/resources-for/faculty/student-conduct-resources-for-faculty/> (<https://www.hccs.edu/resources-for/faculty/student-conduct-resources-for-faculty/>)

Campus Carry Link

Here's the link to the HCC information about Campus Carry:

<https://www.hccs.edu/departments/police/campus-carry/> (<https://www.hccs.edu/departments/police/campus-carry/>)

HCC Email Policy

When communicating via email, HCC requires students to communicate only through the HCC email system to protect your privacy. If you have not activated your HCC student email account, you can go [to HCC Eagle ID \(https://www.hccs.edu/resources-for/current-students/student-e-maileagle-id/\)](https://www.hccs.edu/resources-for/current-students/student-e-maileagle-id/) and activate it now. You may also use Canvas Inbox to communicate.

Office of Institutional Equity

Use the link below to access the HCC Office of Institutional Equity, Inclusion, and Engagement

[\(https://www.hccs.edu/departments/institutional-equity/\)](https://www.hccs.edu/departments/institutional-equity/) (<https://www.hccs.edu/departments/institutional-equity/>)

Ability Services

HCC strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including long and short term conditions, mental health, chronic or temporary medical conditions), please meet with a campus Abilities Counselor as soon as possible in order to establish reasonable accommodations. Reasonable accommodations are established through an interactive process between you, your instructor(s) and Ability Services. It is the policy and practice of HCC to create inclusive and accessible learning environments consistent with federal and state law. For more information, please go to <https://www.hccs.edu/support-services/ability-services/> (<https://www.hccs.edu/support-services/ability-services/>)

Title IX

Houston Community College is committed to cultivating an environment free from inappropriate conduct of a sexual or gender-

based nature including sex discrimination, sexual assault, sexual harassment, and sexual violence. Sex discrimination includes all forms of sexual and gender-based misconduct and violates an individual's fundamental rights and personal dignity. Title IX prohibits discrimination on the basis of sex-including pregnancy and parental status in educational programs and activities. If you require an accommodation due to pregnancy please contact an Abilities Services Counselor. The Director of EEO/Compliance is designated as the Title IX Coordinator and Section 504 Coordinator. All inquiries concerning HCC policies, compliance with applicable laws, statutes, and regulations (such as Title VI, Title IX, and Section 504), and complaints may be directed to:

David Cross
Director EEO/Compliance
Office of Institutional Equity & Diversity
3100 Main
(713) 718-8271
Houston, TX 77266-7517 or Institutional.Equity@hccs.edu (<mailto:Institutional.Equity@hccs.edu>)

<http://www.hccs.edu/departments/institutional-equity/title-ix-know-your-rights/> (<http://www.hccs.edu/departments/institutional-equity/title-ix-know-your-rights/>)

Office of the Dean of Students

Contact the office of the Dean of Students to seek assistance in determining the correct complaint procedure to follow or to identify the appropriate academic dean or supervisor for informal resolution of complaints.

<https://www.hccs.edu/about-hcc/procedures/student-rights-policies--procedures/student-complaints/speak-with-the-dean-of-students/> (<https://www.hccs.edu/about-hcc/procedures/student-rights-policies--procedures/student-complaints/speak-with-the-dean-of-students/>)

Student Success

Expect to spend at least twice as many hours per week outside of class as you do in class studying the course content. Additional time will be required for written assignments. The assignments provided will help you use your study hours wisely. Successful completion of this course requires a combination of the following:

- Reading the textbook
- Attending class in person and/or online
- Completing assignments
- Participating in class activities

There is no short cut for success in this course; it requires reading (and probably re-reading) and studying the material using the course objectives as a guide.

Canvas Learning Management System

Canvas is HCC's Learning Management System (LMS), and can be accessed at the following URL:

<https://eagleonline.hccs.edu> (<https://eagleonline.hccs.edu>)

HCCS Open Lab locations may be used to access the Internet and Canvas. For best performance, Canvas should be used on the current or first previous major release of Chrome, Firefox, Edge, or Safari. Because it's built using web standards, Canvas runs on Windows, Mac, Linux, iOS, Android, or any other device with a modern web browser.

Canvas only requires an operating system that can run the latest compatible web browsers. Your computer operating system should be kept up to date with the latest recommended security updates and upgrades.

HCC Online Information and Policies

Here is the link to information about HCC Online classes, which includes access to the required Online Information Class Preview for all fully online classes: <https://www.hccs.edu/online/> (<https://www.hccs.edu/online/>)

Scoring Rubrics, Sample Assignments, etc.

Look in Canvas for the scoring rubrics for assignments, samples of class assignments, and other information to assist you in the course. <https://eagleonline.hccs.edu/login/ldap> (<https://eagleonline.hccs.edu/login/ldap>)

Instructor and Student Responsibilities

As your Instructor, it is my responsibility to:

- Provide the grading scale and detailed grading formula explaining how student grades are to be derived
- Facilitate an effective learning environment through learner-centered instructional techniques
- Provide a description of any special projects or assignments
- Inform students of policies such as attendance, withdrawal, tardiness, and making up assignments
- Provide the course outline and class calendar that will include a description of any special projects or assignments
- Arrange to meet with individual students during office hours, and before and after class as required

As a student, it is your responsibility to:

- Attend class in person and/or online
- Participate actively by reviewing course material, interacting with classmates, and responding promptly in your communication with me
- Read and comprehend the textbook
- Complete the required assignments and exams
- Ask for help when there is a question or problem
- Keep copies of all paperwork, including this syllabus, handouts, and all assignments
- Be aware of and comply with academic honesty policies in the [HCCS Student Handbook](https://www.hccs.edu/resources-for/current-students/student-handbook/) (<https://www.hccs.edu/resources-for/current-students/student-handbook/>)

Sensitive or Mature Course Content

In this college-level course, we may occasionally discuss sensitive or mature content. All members of the classroom environment, from your instructor to your fellow students, are expected to handle potentially controversial subjects with respect and consideration for one another's varied experiences and values.

EGLS3

The EGLS³ ([Evaluation for Greater Learning Student Survey System](https://www.hccs.edu/resources-for/current-students/egls3-evaluate-your-professors/) (<https://www.hccs.edu/resources-for/current-students/egls3-evaluate-your-professors/>)) will be available for most courses near the end of the term until finals start. This brief survey will give invaluable information to your faculty about their teaching. Results are anonymous and will be available to faculty and division chairs after the end of the term. EGLS³ surveys are only available for the Fall and Spring semesters. -EGLS3 surveys are not offered during the Summer semester due to logistical constraints.

<https://www.hccs.edu/resources-for/current-students/egls3-evaluate-your-professors/> (<https://www.hccs.edu/resources-for/current-students/egls3-evaluate-your-professors/>)

Housing and Food Assistance for Students

Any student who faces challenges securing their foods or housing and believes this may affect their performance in the course is urged to contact the Dean of Students at their college for support. Furthermore, please notify the professor if you are comfortable in doing so.

This will enable HCC to provide any resources that HCC may possess.

Student Resources

Tutoring

HCC provides free, confidential, and convenient academic support, including writing critiques, to HCC students in an online environment and on campus. Tutoring is provided by HCC personnel in order to ensure that it is contextual and appropriate. Visit the [HCC Tutoring Services](https://www.hccs.edu/resources-for/current-students/tutoring/) (<https://www.hccs.edu/resources-for/current-students/tutoring/>) website for services provided.

Libraries

The HCC Library System consists of 9 libraries and 6 Electronic Resource Centers (ERCs) that are inviting places to study and collaborate on projects. Librarians are available both at the libraries and online to show you how to locate and use the resources you need. The libraries maintain a large selection of electronic resources as well as collections of books, magazines, newspapers, and audiovisual materials. The portal to all libraries' resources and services is the HCCS library web page at <https://library.hccs.edu> (<https://library.hccs.edu>).

Supplementary Instruction

Supplemental Instruction is an academic enrichment and support program that uses peer-assisted study sessions to improve student retention and success in historically difficult courses. Peer Support is provided by students who have already succeeded in completion of the specified course, and who earned a grade of A or B. Find details at <https://www.hccs.edu/resources-for/current-students/supplemental-instruction/> (<https://www.hccs.edu/resources-for/current-students/supplemental-instruction/>).

Resources for Students:

<https://www.hccs.edu/resources-for/current-students/communicable-diseases/resources-for-students/>
(<https://www.hccs.edu/resources-for/current-students/communicable-diseases/resources-for-students/>)

Basic Needs Resources:

<https://www.hccs.edu/support-services/counseling/hcc-cares/basic-needs-resources/> (<https://www.hccs.edu/support-services/counseling/hcc-cares/basic-needs-resources/>)

Student Basic Needs Application:

https://hccs.co1.qualtrics.com/jfe/form/SV_25WyNx7NwMRz1FH
(https://hccs.co1.qualtrics.com/jfe/form/SV_25WyNx7NwMRz1FH)

COVID-19

Here's the link to the HCC information about COVID-19:

<https://www.hccs.edu/resources-for/current-students/communicable-diseases/> (<https://www.hccs.edu/resources-for/current-students/communicable-diseases/>)

Instructional Modalities

In-Person (P)

Safe, face-to-face course with scheduled dates and times

Online on a Schedule (WS)

Fully online course with virtual meetings at scheduled dates and times

Online Anytime (WW)

Traditional online course without scheduled meetings

Hybrid (H)

Course that meets safely 50% face-to-face and 50% virtually

Hybrid Lab (HL)

Lab class that meets safely 50% face-to-face and 50% virtually

Course Calendar

Weekly Course Schedule

Week	Dates	Topic
1	8/23-8/29	Syllabus Course Introduction
2	8/30-9/5	Design Process and Schematic Design
3	9/6-9/12 Official Day (9/7)	Whole Building Energy Analysis
4	9/13-9/19	Schematic Design Presentation, Virtual Reality Lab Work
5	9/20-9/26	Preliminary Design - Architecture
6	9/27-10/3	Preliminary Design – Architecture and Structure
7	10/4-10/10	Preliminary Design - Structure
8	10/11-10/17	Midterm Examination, Virtual Reality Lab Work
9	10/18-10/24	Preliminary Design - HVAC
10	10/25-10/31 Last Day of W (10/29)	Preliminary Design - HVAC
11	11/1-11/7	Construction Documents - Architecture
12	11/8-11/14	Construction Documents - Architecture
13	11/15-11/21	Construction Documents - Architecture
14	11/22-11/28	Construction Documents – Details, Virtual Reality Lab Work
15	11/29-12/5	Final Exam
16	12/6-12/12	Student Presentation

Syllabus Modifications

The instructor reserves the right to modify the syllabus at any time during the semester and will promptly notify students in writing, typically by e-mail, of any such changes.

Additional Information

Departmental/Program Information

The mission of the Drafting and Design Engineering Technology Program is to provide the most current technical training in Architectural or Engineering Design Drafting disciplines.

AWARD TYPES: Associate in Science, Certificate Level 1

We offer degrees in 6 specializations: General, Architectural, Civil, Electrical, Mechanical, Piping.

For study plans and additional information visit:

<https://www.hccs.edu/programs/areas-of-study/science-technology-engineering--math/drafting--design-engineering-technology/>

Process for Expressing Concerns about the Course

If you have concerns about any aspect of this course, please reach out to your instructor for assistance first. If your instructor is not able to assist you, then you may wish to contact the Department Chair.

Minh Pham

minh.pham@hccs.edu

713-718-8410
