

new jersey institute of technology | fall 2024

arch483-101: special topics

ARE 5.0 REVIEW COURSE

monday 18:00-20:50

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office hours by appointment

COURSE DESCRIPTION

This elective will provide a roadmap and help students navigate becoming a licensed Architect in the state of NJ, with a focus on the examination component of licensure. Most of the course will be structured to prepare students to pass the 6 divisions of NCARB's Architectural Registration Exam 5.0 (ARE 5.0), while some nuances of practicing in New Jersey will be discussed. The course will concentrate on topics covered in the exam and will provide a framework to organize and review content for the examination.

The National Council of Architectural Registration Boards' (NCARB) Architect Registration Examination Guidelines are considered complementary to this syllabus regarding: learning objectives; examination material, procedures, and conduct; and reference resources. These guidelines can be found here and will be discussed at the first class:

<https://www.ncarb.org/sites/default/files/ARE-5-Guidelines.pdf>

The course material will be structured around topics but can ultimately be classified under one or more of the ARE 5.0 divisions:

PcM - Practice Management,

PjM - Project Management,

CE - Construction Evaluation,

PA - Programming & Analysis,

PPD - Project Planning and Design,

PDD - Project Detailing & Documentation

COURSE LEARNING OUTCOMES

The National Architectural Accrediting Board (NAAB) accredits NJIT's architecture program. The NAAB has Shared Values of the Discipline and Profession that must be covered by any architectural curriculum to attain their approval. This course satisfies the following shared values:

Design:

Architects design better, safer, more equitable, resilient, and sustainable built environments. Design thinking and integrated design solutions are hallmarks of architecture education, the discipline, and the profession.

- Evaluate and incorporate appropriate materials and building systems
- Address environmental sustainability, resiliency, and adaptation in projects
- Establish programmatic requirements
- Provide and coordinate project documentation for a building and site
- Establish and coordinate project team activities

Environmental Stewardship and Professional Responsibility:

Architects are responsible for the impact of their work on the natural world and public health, safety, and welfare. As professionals and designers of the built environment, we embrace these responsibilities and act ethically to accomplish them.

- Evaluate legal, ethical, and contractual standards
- Establish regulatory requirements
- Provide and coordinate project documentation for a building and site
- Assess projects during all phases

This course will engage students to expand and apply the knowledge accrued to be competent in professional scenarios relating to the health, safety, and welfare of the public - which is NCARB's ARE 5.0's basis of competency. The assessment of these learning outcomes will occur via homework assignments, quizzes, and 3 penultimate exams simulating the divisions of the ARE 5.0.

TESTS & ASSIGNMENTS

The semester will be divided into 3 units each containing two divisions - professional practice (**PcM** + **PjM**), site-specific experience (**CE** + **PA**), and technical knowledge (**PPD** + **PDD**). Each unit will conclude with a simulated exam following a format similar to the ARE 5.0. See exam grading policy below.

Note-taking is a critical skill for students and professionals to communicate, store, and prioritize information. It also helps process material and keep course participants engaged. Students will be required to maintain a notebook of their notes throughout the course that will be submitted at the end of each unit. This will help grow the aforementioned skills and provide students a reference framework when they begin to take the ARE 5.0 exams. Each notebook project will be compiled as a **single compiled pdf of 8.5 x 11 sheets submitted to Canvas by Sunday 11:59 pm each night before exams**. The quantity should range from 25-50 pages; students' goal should be to have a tool to reflect back to following their graduation.

Students can expect weekly homework assignments related to course content throughout the semester posted to Canvas. Assignments may include reading or assessments such as quizzes, discussions, and worksheets.

| | | |
|---------------------------------|------------------------------|------------|
| Exam 1 | (PcM + PjM) | 20% |
| Exam 2 | (CE + PA) | 20% |
| Exam 3 | (PPD + PDD) | 20% |
| Notebook Project | (PcM, PjM, CE, PA, PPD, PDD) | 20% |
| Participation/Weekly Assignment | (PcM, PjM, CE, PA, PPD, PDD) | <u>20%</u> |
| | | 100% |

GRADING POLICY

| | | | |
|----|-----------|---|------------|
| A | Superior | C | Acceptable |
| B+ | Excellent | D | Minimum |
| B | Very Good | F | Inadequate |
| C+ | Good | W | Withdrawal |

Predicted passing rates of the ARE 5.0 have been established by Hyperfine Academy. ([Hyperfine "ARE 5.0 - Passing Score"](#)) NJIT's letter grade system has been proportionally distributed to the predicted passing rate. Below is the grading system that will be used for each exam.

| | NCARB's PASSING RANGE | | | | | | |
|-----------|-----------------------|-------|-------|-------|-------|-------|------|
| | A | B+ | B | C+ | C | D | F |
| PcM + PjM | 100-74 | 73-70 | 69-64 | 63-59 | 58-45 | 44-31 | 30-0 |
| CE + PA | 100-72 | 71-69 | 68-65 | 64-62 | 61-48 | 47-31 | 30-0 |
| PPD + PDD | 100-72 | 71-69 | 68-65 | 64-62 | 61-48 | 47-31 | 30-0 |

REQUIRED & RECOMMENDED MATERIALS

Additional source material may be posted to the course's Canvas page throughout the semester. Students should be reviewing material as prescribed throughout lectures.

Required Text:

Ballast, David Kent. *"ARE 5.0 Exam Review"* 2e. PPI. ISBN: 978-1591266808

Edward Allen, Joseph Iano. *"The Architect's Studio Companion: Rules of Thumb for Preliminary Design"* 7e. Wiley. ISBN: 978-1119826798

National Council of Architectural Registration Boards (NCARB). *"Architect Registration Examination Guidelines"*.

<https://www.ncarb.org/sites/default/files/ARE-5-Guidelines.pdf>

American Institute of Architects (AIA). *"2024 Code of Ethics and Professional Conduct"*.

<https://www.aia.org/sites/default/files/2024-04/aia-code-of-ethics-april-2024.pdf>

National Council of Architectural Registration Boards (NCARB). *"Model Rules of Conduct"*. https://www.ncarb.org/sites/default/files/Rules_of_Conduct.pdf

American Institute of Architects (AIA). *"B101-2017, Standard Form of Agreement Between Owner and Architect"*.

American Institute of Architects (AIA). *"A201-2017, General Conditions of the Contract for Construction"*.

International Code Council. *"2021 International Building Code (IBC)"*.

<https://codes.iccsafe.org/content/IBC2021P2>

International Code Council. *"2017 ICC A117.1 Accessible and Usable Buildings and Facilities"*.

<https://codes.iccsafe.org/content/icca117-12017/american-national-standard>

United States Department of Justice. “2010 ADA Standards for Accessible Design”.
<https://archive.ada.gov/regs2010/2010ADAStandards/2010ADAStandards.pdf>

Federal Emergency Management Agency (FEMA) of the U.S. Department of Homeland Security. “FEMA454 Designing for Earthquakes - A Manual for Architects”.
<https://www.wbdg.org/FFC/DHS/fema454.pdf>

Recommended Material:

American Institute of Architecture (AIA). “*The Architect’s Handbook of Professional Practice*” 15e. Wiley. ISBN: 978-1118308820

Francis D.K. Ching, Steven R. Winkel. “*Building Codes Illustrated: A Guide to Understanding 2021 International Building Code*” 6e. Wiley. ISBN: 978-1119772408

Francis D.K. Ching. “*Building Construction Illustrated*”, 6e. Wiley. ISBN: 978-1119583080

ACADEMIC INTEGRITY

Consult document titled “Best Practices related to Academic Integrity” on DOS website

The NJSoA maintains that academic integrity and honesty are of paramount importance. Cheating and plagiarism will not be tolerated. The NJIT Honor Code will be upheld, and any violations will be dealt with by the department or brought to the immediate attention of the Dean of Students. All students are responsible for upholding the integrity of NJIT by reporting any violation of academic integrity. The identity of the student filing the report will remain anonymous. All students are expected to adhere to the University Code on Academic Integrity (<https://www.njit.edu/dos/academic-integrity>) and to the Code of Student Conduct (<https://www.njit.edu/dos/policies/conductcode/index.php>).

HCAD librarian Maya Gervits has assembled excellent resources for students’ use on using images, citing, and plagiarism:
<https://researchguides.njit.edu/c.php?g=671665&p=4727920>

LEARNING AND TEACHING CULTURE POLICY

In addition to the overarching values and ethics of the university, the NJSoA is dedicated to optimism, diversity and solidarity, professional conduct, constructive

evaluation and instruction, collaborative community, health and wellbeing, time management and school-life-work balance, respectful stewardship and space management, and well-rounded enrichment. The pedagogy of architecture and design is as complex as it is rewarding, and as dynamically evolving as the people who learn and teach it. This understanding resides at the core of the NJIT Learning and Teaching Culture Policy:

<https://design.njit.edu/learning-and-teaching-culture-policy>

If you are in need of accommodations due to a disability please contact the Office of Accessibility Resources & Services (OARS) at OARS@NJIT.EDU, or visit Kupfrian Hall 201, to discuss specific needs. A Letter of Accommodation Eligibility from the OARS authorizing your accommodations will be required.

ABSENCES

Per NJIT's Attendance Policy, students are expected to attend all regularly scheduled classes and engage with the course canvas page. Students who expect to miss classes or exams because of religious observance must submit notice of dates by the end of the second week and accommodations will be coordinated for the individuals. Students are responsible for all missed coursework. In the event of a missed assignment and/or exam, students must submit proof of absence to the Dean of Students. Accommodations will be made upon receipt of excused absence from the Dean of Students.

If a student's continued absence begins to affect academic performance, a midterm warning will be issued per HCAD's policy.

SCHEDULE

| Wk | Topic | P C M | P j M | C E | P A | P D | P D | Homework |
|----|--|-------------|-------------|--------|--------|--------|--------|----------------------|
| 1 | Syllabus & Intro to Licensure | | | | | | | |
| 2 | The Architect and The Firm | • | | | | | | |
| 3 | Contract Documents - B101 | • | | | | | | |
| 4 | Project Delivery Methods | • | • | | | | | |
| 5 | Contract Documents - A201 | | • | • | | | | |
| 6 | Project Management & Construction Administration | | • | • | | | | |
| 7 | Exam 1 (PcM & PjM) | • | • | | | | | Notebook Project Due |
| 8 | Climate & Sustainability | | | | • | | | |
| 9 | Codes | | | | • | • | • | |
| 10 | Environmental & Site Analysis | | | | • | | | |
| 11 | Structures & Water Protection | | | • | • | • | • | |
| 12 | Exam 2 (CE + PA) | | | • | • | | | Notebook Project Due |
| 13 | Thermal, HVAC, Plumbing | | | | | • | • | |
| 14 | Electrical, Acoustics, Fire Protection | | | | | • | • | |
| 15 | Exam 3 (PPD + PDD) | | | | | • | • | Notebook Project Due |