instructor:
Ihab Elzeyadi, Ph.D., FEIA
Professor of Architecture

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meetings:
Tues.
12:00-13:50, LA 278
Thurs.
12:00-13:50, LA 383

crn:
410: 10250
510: 10306

readings:
reading packet
+ IES_VE
software
+ Arduino
sensors &
motor kit

credits:
4cr. hr

grading:
graded or P/N

format:
seminar with illustrated
lectures and lab focusing
on simulation, programming,
and analysis of dynamic
facade prototypes. The
seminar is devoted to
design and testing of high
performance dynamic
facades using state-of-the-
art simulation packages
and physical prototypes.

prerequisites:
- Arch 4/592, or prof.
permission

course objectives:
this seminar focuses on the theory,
methods, and metrics of high-
performance dynamic façades (HDF). It
will introduce participants to tools and
techniques of activated/dynamic facades
through design, testing, simulations,
sensor coding, and construction of
prototypes. The seminar will use a hands-
on learning approach engaging students
in a facade POE and retrofit of a LEED
v.4.2 all-glass building. The seminar will
mainly focus on solar control, natural
ventilation micro flows, daylighting
harvesting, thermal comfort, visual
comfort, indoor air quality, and material
analysis related to activated skin
buildings.

skin-deep: high performance dynamic facades

special topics in high performance buildings design and evaluation

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