

ARCHITECTURAL ENGINEERING MAJOR
Program Tracking Sheet
 Effective for students entering in AY 2024-2025

Name:	Class Year:
Advisor:	2 nd Major:

NOTES: Minimum total academic credit = 15 units
 Residency Req.: Min. of 8 units must be completed at WPI

HUMANITIES AND ARTS (6/3 unit)
 All 5 HUA courses must be completed before beginning the Inquiry Seminar or Practicum.

Depth Component
 Students must complete at least three thematically-related courses prior to the culminating Inquiry Seminar or Practicum in the same thematic area. At least one of the three courses should be at the 2000-level or above.

	Course	Term	Grade	Units
1				1/3
2				1/3
3				1/3
4	HU 3900 or HU 3910			1/3

Breadth Component
 Students must take at least one course outside the grouping in which they complete their depth component. To identify breadth, courses are grouped in the following manner.

- i. art/art history, drama/theatre, and music (AR, EN/TH, MU);
- ii. foreign languages (AB, CN, EN, GN, SP);
- iii. literature and writing rhetoric (EN, WR, RH);
- iv. history and international studies (HI, HU, INTL);
- v. philosophy and religion (PY, RE).

Exception: May take all six courses in a foreign language

5				1/3
---	--	--	--	-----

Humanities Elective

6				1/3
---	--	--	--	-----

WELLNESS AND PHYSICAL EDUCATION (4 WPE classes = 1/3 unit)

7				1/12
				1/12
				1/12
				1/12

SOCIAL SCIENCE (2/3 unit) ECON, ENV, GOV, PSY, SD, SOC, SS, STS, DEV and ID2050

8				1/3
---	--	--	--	-----

9				1/3
---	--	--	--	-----

THE INTERACTIVE QUALIFYING PROJECT (1 unit)

10				1/3
----	--	--	--	-----

11				1/3
----	--	--	--	-----

12				1/3
----	--	--	--	-----

MATHEMATICS AND BASIC SCIENCES (4 units)

MATHEMATICS (7/3 unit) Courses with prefix: MA

13	MA 1021 (Calc 1)			1/3
----	------------------	--	--	-----

14	MA 1022 (Calc 2)			1/3
----	------------------	--	--	-----

15	MA 1023 (Calc 3)			1/3
----	------------------	--	--	-----

16	MA 1024 (Calc 4)			1/3
----	------------------	--	--	-----

17	MA 2051 (Diff Eqs)			1/3
----	--------------------	--	--	-----

18	MA 2071 (Lin Alg)			1/3
----	-------------------	--	--	-----

19	MA 2611 (Applied Statistics)			1/3
----	------------------------------	--	--	-----

PHYSICS (2/3 unit) Courses with prefix: PH

20	PH 1110/1111 (Mechanics)			1/3
----	--------------------------	--	--	-----

21	PH 1120/1121 (E&M)			1/3
----	--------------------	--	--	-----

CHEMISTRY (1/3 unit) Course with prefix: CH

22	CH 1010 (Chem 1) or 1020 (Chem 2)			1/3
----	-----------------------------------	--	--	-----

MATH AND BASIC SCIENCE ELECTIVES (2/3 unit)

Must include 1/3 unit in Thermodynamics (Note 1). Must include 1/3 unit in fluid mechanics (can be fulfilled by ES 3004)

23				1/3
24				1/3

ARCHITECTURAL ENGINEERING SCIENCE AND DESIGN (7 units)
(Note 2, 3, 4)

ARCHITECTURAL ENGINEERING COMPLEMENTS (2/3 units)

25	AR 2114 Mod Arch in the American Era			1/3
----	--------------------------------------	--	--	-----

26	AREN 2023 Intro to AREN Systems			1/3
----	---------------------------------	--	--	-----

CONSTRUCTION/CONSTRUCTION MANAGEMENT (2/3 units)

27	CE 3025 or OIE 2850			1/3
----	---------------------	--	--	-----

28	CE 3022 or CE 3020			1/3
----	--------------------	--	--	-----

BUILDING MECHANICAL SYSTEMS (5/3 units)

29	AREN 3024 Building Physics			1/3
----	----------------------------	--	--	-----

30	AREN 3003 Principles of HVAC design for buildings			1/3
----	---	--	--	-----

31	AREN 3006 Advanced HVAC Design			1/3
----	--------------------------------	--	--	-----

32	AREN 3020 Architectural Design IV- Building Energy Simulation			1/3
----	---	--	--	-----

33	AREN 3022 Architectural Design V- Building Envelope Design			1/3
----	--	--	--	-----

BUILDING ELECTRICAL SYSTEMS (2/3 units)

34	AREN 2025 Building Electrical Systems			1/3
----	---------------------------------------	--	--	-----

35	AREN 2004 Architectural Design II- Light and Lighting Systems			1/3
----	---	--	--	-----

BUILDING STRUCTURAL ENGINEERING (5/3 units) (Note 2)

36	CE 2000 Analytical Mechanics I			1/3
----	--------------------------------	--	--	-----

37	CE 2001 Analytical Mechanics II			1/3
----	---------------------------------	--	--	-----

38	CE 2002 Introduction to Analysis and Design			1/3
----	---	--	--	-----

39				1/3
----	--	--	--	-----

40				1/3
----	--	--	--	-----

GENERAL ARCHITECTURAL DESIGN (2/3 units)

41	AREN 2002 Architectural Design I			1/3
----	----------------------------------	--	--	-----

42	AREN 3002 Architectural Design III			1/3
----	------------------------------------	--	--	-----

MAJOR QUALIFYING PROJECT (1 unit) (Note 3)

43				1/3
----	--	--	--	-----

44				1/3
----	--	--	--	-----

45				1/3
----	--	--	--	-----

Note 1: Can be satisfied with PH 2101 as a Mathematics and Basic Science Elective, or ES 3001, Introduction to Thermodynamics as a Free Elective, or other approved equivalent course.

Note 2: The additional two structural engineering courses should be two design level structural engineering courses (such as CE 3006, 3008, 3010, or 3044)

Note 3: Must include the Capstone Design activity through the MQP that achieves design proficiency in either the structural or mechanical area.

Note 4: Must include 1/3 unit in Experimentation (fulfilled by AREN 3003, AREN 3020, ME 3901, CE 3026 or approved equivalent).

Note 5: GPS courses can only be used to fulfill the HUA, SSPS, or the Free Elective Requirements.