

**ARCHITECTURAL ENGINEERING MAJOR**  
**Program Tracking Sheet**  
 Effective for students entering in AY 2021-2022

Name:	Class Year:
Advisor:	2 <sup>nd</sup> 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
<b>Humanities Elective</b>				
6				1/3

**PHYSICAL EDUCATION (4 PE classes = 1/3 unit)**

				1/12
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
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**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:** Thermodynamics can be fulfilled by PH 2101 or other approved equivalent course such as ES 3001.

**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 3025, 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.