

**ARCHITECTURAL ENGINEERING MAJOR**  
**Program Tracking Sheet**  
 Effective for students entering in AY 2019-2020

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
Humanities Elective				
6				1/3

**PHYSICAL EDUCATION (4 PE 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 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:** 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 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.