

**ARCHITECTURAL ENGINEERING MAJOR – Focus on the Mechanical Area**  
**Program Tracking Sheet Based on AY 2017-18 Degree Requirements and Course Offerings**

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 REQUIREMENT (2 units)**  
 All 5 HUA courses must be completed before beginning the Inquiry Seminar or Practicum.

<b>Depth Component</b>				
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
<b>Breadth Component</b>				
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)**

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

**FREE ELECTIVES (1 unit)**

13				1/3
14				1/3

**MATHEMATICS AND BASIC SCIENCES (4 units)**  
**MATHEMATICS (7/3 unit) Courses with prefix: MA**

15	MA 1021 (Calc 1)			1/3
16	MA 1022 (Calc 2)			1/3
17	MA 1023 (Calc 3)			1/3
18	MA 1024 (Calc 4)			1/3
19	MA 2051 (Diff Eqs)			1/3
20	MA 2071 (Lin Alg)			1/3
21	MA 2621 (Probability for Applications)			1/3

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

22	PH 1110/1111 (Mechanics)			1/3
23	PH 1120/1121 (E&M)			1/3

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

24	CH 1010 (Chem 1) or 1020 (Chem 2)			1/3
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**MATH AND BASIC SCIENCE ELECTIVES (2/3 unit)**  
 Including 1/3 unit in Thermodynamics (Note 1)

25				1/3
26				1/3

**ARCHITECTURAL ENGINEERING COMPLEMENTS (1 unit)**

27	AREN 2002 Architectural Design I			1/3
28	AR 2114 Mod Arch in the American Era			1/3
29	AREN 3002 Architectural Design			1/3

**ENGINEERING SCIENCE AND DESIGN REQUIREMENT (13/3 units)**  
 (Notes 2, 3)

**GENERAL ARCHITECTURAL ENGINEERING (2/3 units)**

30	AREN 2023 Intro to Arch Eng Systems			1/3
31	AREN 3024 Building Physics			1/3

**CONSTRUCTION/CONSTRUCTION MANAGEMENT (2/3 units)**

32	CE 3020 or CE 3022			1/3
33	CE 3025 Project Evaluation			1/3

**BUILDING MECHANICAL SYSTEMS (2/3 units)**

34	AREN 3003 Principles of HVAC Design			1/3
35	FP 3080 or AREN 3026			1/3

**BUILDING STRUCTURAL ENGINEERING (3/3 units)**  
 Select three of the following: CE 2000, 2001, 2002, 3041

36				1/3
37				1/3
38				

**BUILDING ELECTRICAL SYSTEMS (2/3 units)**

39	AREN 2025 Building Electrical Systems			1/3
40	AREN 3005 Lighting Systems			1/3

**DESIGN FOCUS ON THE MECHANICAL AREA (2/3 units)**  
 Select two of the following: AREN 3006, AREN 3025, ES 3005, FP 3070

41				1/3
42				1/3

**MAJOR QUALIFYING PROJECT (1 unit)**  
 (Note 4)

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:** Must include 1/3 unit in Experimentation (fulfilled by AREN 3003, AREN 3025, ME 3901, CE 3026 or approved equivalent).

**Note 3:** Courses in Engineering Science and Design Chart above can be replaced by other approved equivalents.

**Note 4:** Must include the Capstone Design Activity.