

II.2.2 Professional Degrees and Curriculum

Description of Program Types

The Montana State University School of Architecture currently offers two degrees: a four-year Bachelor of Arts in Environmental Design (B.A.ED) and a three-semester Master of Architecture (M.Arch) degree, which at the current time can be completed in one calendar year—Fall, Spring and Summer semesters. The current B.A.ED program requires 120 credits to complete and the Master of Architecture program requires 42 credits to complete. Beginning Fall 2014, the B.A.ED program will require 126 credits to complete which combined with our 42 credit Master of Architecture program will be a combined 168 credits. This new 168-credit combined curriculum has been approved by the School and College curriculum committees, the University Core Curriculum Committee, Graduate Council, Faculty Senate, Deans Council and the Office of the Provost. It was presented to the Board of Regents in July 2013 and will receive a final vote in September 2013 (after this report is due). Thus far all reviews have been very positive and we are hopeful that the Board of Regents will provide final approval in September. This will allow the new 168 credit curriculum to be included in the 2014-16 Undergraduate and Graduate Catalogs. All students who graduate from the Master of Architecture Program after January 1, 2015 will be required to have completed 168 combined undergraduate and graduate credits.

In the first year of the undergraduate program, students enter the pre-Environmental Design program during which they take the first year of their design studio, along with the vast majority of their University Core requirements. The initial design studio, ARCH 151RA has been given university core designation as a Research/Creative Activity in the Arts core course. Students must complete a set of Foundation Core Courses in Writing(W), Quantitative Reasoning(Q), Diversity(D), Contemporary Issues in Science(CS) and University Seminar(US) along with Inquiry or Research core courses in Arts(IA or RA), Social Sciences(IS or RS), Natural Sciences(IN or RN) and Humanities(IH or RH). Information on the university Core 2.0 requirements and categories can be seen at <http://www.montana.edu/wwwcat/requirements/reqs4.html> .

The current University Core 2.0 requirements for all students at MSU-Bozeman are as follows:

University Seminar (US)	3 credits
College Writing (W)	3 credits
Quantitative Reasoning* (Q)	3 credits
Diversity (D)	3 credits
Contemporary Issues in Science (CS)	3 credits
Arts (IA or RA)	3 credits
Humanities (IH or RH)	3 credits
Natural Sciences (IN or RN)	3 credits
Social Sciences (IS or RS)	3 credits
Minimum number of Core 2.0 credits required	27 credits

* Some Quantitative Reasoning courses are 3 credits. The School of Architecture requires M151Q PreCalculus which is 4 credits. In the above chart we have shown the minimum number of credits required in the core—many students at the University take more credits to complete Core 2.0.

At the end of the first year, students apply to the second year of the professional program. Students must submit a portfolio of their work, which is reviewed and evaluated by the Second Year Admissions Committee. Acceptance is based upon a combination of the portfolio ranking and the Grade Point Average of each student. Enrollment in the pre-professional program was increased from 65 students to 91 students and from 52 to 72 in the professional program beginning Fall 2006 as part of the 2006 expansion agreement with the university. However, our student numbers in the undergraduate program have dropped as a result of the recession and we currently have between 50-65 students in each year of our undergraduate program. As a result of this expansion agreement we have one required summer design studio to accommodate the increase in student numbers that occurred from 2006-2009. However, the new 168 credit curriculum will relax the summer studio requirement as our present student enrollment can allow for a Fall, Spring, Fall semester sequence. This will take place beginning Fall 2014. Summer graduate studios will continue to be offered as an option for students.

Once accepted into the professional program, students complete their University Core requirements and undertake a significant portion of the architectural requirements including design studios, structures, graphics, computer graphics, history and environmental control systems in the second and third year of the program.

During their fourth year students can apply for the Master of Architecture degree program. Fourth year MSU architecture students are included in a pool of applicants that also includes applicants from other undergraduate institutions. Students must submit a portfolio of their design work, which is reviewed by the Graduate Program Coordinator and the Graduate Admissions Committee. In addition, students must take the Graduate Record Examination and apply for admission to the MSU Graduate School. Approximately 55-65 students are accepted into the Graduate Program at this time

During the fourth year of the pre-professional Program, students take a capstone studio as part of the B.A.ED degree. In our current curriculum this capstone studio is ARCH 456 but in the new 168 credit curriculum an additional studio will be added and ARCH 457 will be the new designated capstone studio in the pre-professional program. Due to the timing of the implementation, this Arch 457 capstone studio will not occur until Spring 2016. During the upcoming site visit, however, we will be exhibiting the work of our current capstone studio, ARCH 456. The curriculums presented later in this report will include our current 120 credit B.A.in Environmental Design degree program and the 126 credit B.A. Environmental Design program which will begin in Fall 2014.

Students have a number of design studio options from which they choose during their fourth year ranging from the ARCH 414 Architectural Study Abroad, ARCH 450 Community Design Center , ARCH 458 Architectural Design VI (The Remote Studio) or ARCH 498 Internship. In addition, students take a series of non-architectural electives and complete any university core if these requirements have not yet been met.

Once accepted into our Master of Architecture program, students will take three 6-credit graduate level studios—currently listed as ARCH 557, ARCH 551 and either ARCH 558. In our current curriculum, ARCH 558 Comprehensive Design Studio is the final design studio that students take. However, in our new curriculum, students will take ARCH 558 Comprehensive Design Studio as their first graduate design studio and this studio will be taken with two new required graduate courses, ARCH 535 Advanced Building Systems and ARCH 526 Advanced Architectural Theory. Students will take ARCH 551 as their second graduate studio along with ARCH 575 Research Paper/Project in which students will undertake research in preparation for their final student-directed graduate studio, ARCH 560 Masters Studio Project.

Students take graduate level electives—both architecture electives and non-architecture electives—in order to satisfy the requirement for all students to take at least 45 non-architecture credits as part of their undergraduate and graduate coursework. If students have completed at least 45 non-architecture credits prior to their graduate year, they are still required to have 42 graduate credits to receive the M.Arch degree, but they may choose to take architecture or non-architecture graduate electives.

The graduate program utilizes the Professional Paper or Project (Plan B) option for a student's master degree plan. More information on this can be found at http://www.montana.edu/wwwdg/cat_for_masters_stud.html

Curriculum - Existing

Following is the curriculum currently in place in the School of Architecture for the Bachelor of Arts in Environmental Design and the Master of Architecture degree.

Bachelor of Arts in Environmental Design

- 120 Credits Minimum

Pre-Environmental Design Program

First Year

Fall Semester			Spring Semester		
ARCH 121IA	Intro to Design	3	ARCH 152	Design Fundamentals II	4
ARCH 151RA	Design Fundamentals I	4	PHYX 205	College Physics I	4
M 151Q	PreCalculus	4		University Core (W, US, D, CS, R/IH, R/IN, or R/IS)	9
	University Core (W, US, D, CS, R/IH, R/IN, or R/IS)	3			
Total		14	Total		17

Environmental Design Program

Second Year

Fall Semester			Spring Semester		
ARCH 261	Architectural Graphics I	3	ARCH 253	Architectural Design I	5
ARCH322IA	World Arch I	3	ARCH 262	Architectural Graphics II	3
ARCH 243	Arch Structures I	4	ARCH322IA	World Arch II	3
	University Core (W, US, D, CS, R/IH, R/IN, or R/IS)	6	ARCH 244	Arch Structures II	4
Total		16	Total		15

Third Year

Fall Semester			Spring Semester		
ARCH 241	Building Construction I	3	ARCH 332	Environmental Controls II	4
ARCH 331	Environmental Controls I	4	ARCH 340	Building Construction II	4
ARCH 354	Architectural Design II	5	ARCH 355	Architectural Design III	5
ARCH 363	Architectural Graphics III	3		University Core (W, US, D, CS, R/IH, R/IN, or R/IS)	3
Total		15	Total		16

Fourth Year

Fall Semester			Spring or Summer Semester		
ARCH 456	Architectural Design IV	5	ARCH 414	Arch. Study Abroad	9
ARCH 413	Professional Practice	3	ARCH 428	Foreign Study History	3
	Non-Arch Electives	7	or		
			ARCH 450	Community Design Center- Electives – 7 cr	5
			or		
			ARCH 458	Architectural Design Electives – 7 cr	5
			or		
			ARCH 498	Internship	12
Total		15	Total		12

Master of Architecture - 42 Credit Minimum

<i>Fall or Spring Semester</i>			<i>Spring or Summer Semester</i>			<i>Summer or Fall Semester</i>		
ARCH 557	Arch Design Studio	6	ARCH 551	Advanced Arch Studio	6	ARCH 558	Comp. Design Studio	6
ARCH 552	Arch Research Methods	3		Graduate Electives	6		<u>Graduate Electives</u>	<u>6</u>
	<u>Non-Arch Grad Electives</u>	<u>6</u>		<u>Non-Arch Grad Electives</u>	<u>3</u>			
Total		15	Total		15	Total		12

Students can start the 3 semester graduate program in Fall or Spring Semesters taking studios in the following sequence: ARCH 557, ARCH 551 and ARCH 558.

All students are required to take one summer graduate level studio as part of the 2006 expansion agreement in our current curriculum. This requirement will be relaxed in our new curriculum beginning Fall 2014.

Students who complete the 45 non-architecture requirement prior to their start of the M.Arch program may substitute architecture graduate electives for non-architecture graduate electives.

Curriculum Requirements: General Studies, Professional Studies, Non-Architecture Electives- Existing

The required curriculum can be broken down into the following areas:

Pre-Environmental Design Program

First Year

Course	Credits	General Studies	Professional Studies	<i>Non-Arch.</i> Electives
ARCH 121IA Intro to Design	3		3	
ARCH 151RA Design Fundamentals I	4		4	
ARCH 152 Design Fundamentals II	4		4	
M151Q PreCalculus		4		
PHYX 205N College Physics I	4	4		
University Core(s)	12	12		
Sub-Total Pre-Professional Program	31	20	11	0

Environmental Design Program

Second Year

Course	Credits	General Studies	Professional Studies	<i>Non-Arch.</i> Electives
ARCH 243 Arch Structures I	4		4	
ARCH 244 Arch Structures II	4		4	
ARCH 253 Architectural Design I	5		v	
ARCH 261 Architectural Graphics I	3		3	
ARCH 262 Architectural Graphics II	3		3	
ARCH 322IA World Arch I	3		3	
ARCH 323IA World Arch II	3		3	
University Core(s)	6	6		
Sub-Total Second Year	31	6	25	0

Third Year

Course	Credits	General Studies	Professional Studies	<i>Non-Arch. Electives</i>
ARCH 241 Building Construction I	3		3	
ARCH 331 Environmental Controls I	4		4	
ARCH 332 Environmental Controls II	4		4	
ARCH 340 Building Construction II	4		4	
ARCH 354 Architectural Design II	5		5	
ARCH 355 Architectural Design III	5		5	
ARCH 363 Architectural Graphics III	3		3	
University Core(s)	3	3		
<i>Sub-Total Third Year</i>	<i>31</i>	<i>3</i>	<i>28</i>	<i>0</i>

Fourth Year

Course	Credits	General Studies	Professional Studies	<i>Non-Arch. Electives</i>
ARCH 456 Architectural Design IV	5		5	
ARCH 413 Professional Practice	3		3	7
Non-Architectural Electives	7			
Required Fourth Year <i>Design Studio Options*</i> ARCH 414 Arch. Study Abroad ARCH 450 Community Design Center ARCH 458 Architectural Design VI <u>ARCH 476 Internship</u>	12		12	
<i>Sub-Total Fourth Year</i>	<i>27</i>	<i>0</i>	<i>20</i>	<i>7</i>

Master of Architecture Program**Graduate Year**

Course	Credits	General Studies	Professional Studies	<i>Non-Arch. Electives</i>
ARCH 552 Arch Research Methods	3		3	
ARCH 551 Advanced Architectural Studio	6		6	
ARCH 557 Architectural Design Studio	6		6	
ARCH 558 Comprehensive Design Studio	6		6	
Architectural Electives	12		12	
Non-Architectural Electives	9			9

<i>Sub-Total Graduate Level</i>	42	0	33	9
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Total Semester Undergraduate Credits required for the Bachelor of Arts in Environmental Design Degree: 120

Total Semester Graduate Credits required for Master of Architecture Degree: 42

*During the fourth and graduate years of design, students have a wide range of options available to satisfy the studio requirement.

Credit Distribution Summary

Year of Program	Credits	General Studies	Professional Studies	<i>Non-Arch. Electives</i>
First Year	31	20	11	-
Second Year	31	6	25	-
Third Year	31	3	28	-
Fourth Year	27	-	20	7
Graduate Level	42	-	33	9
Total	162	29	117	16

The total required General Studies courses and the Non-Architectural Electives comprise 45 credits of the 162 credit Master of Architecture degree program at MSU.

Required Fourth Year Design Studio Options

Fourth year students are required to take one design studio—ARCH 456 Architectural Design IV in Bozeman (ARCH 457 in the new curriculum). In the fourth year of the program students must select a Fourth Year Design Studio Option which is selected from the choices below:

- ARCH 414 Architectural Study Abroad--with ARCH 428 Foreign Study History as a co-requisite, 12 credits total
- ARCH 450 Community Design Center, 5 credits
- ARCH 458 Architectural Design VI, 5 credits
- ARCH 498 Architectural Practice Internship, 12 credits

Architectural Electives

Following is a list of the current architectural electives listed in the architecture program:

- ARCH 231CS Issues in Sustainability, 3 credits
- ARCH 290R Undergraduate Research, 1-6 credits
- ARCH 291 Special Topics, 1-4 credits
- ARCH 292 Independent Study, 1-3 credits
- ARCH 294 Seminar, 1-2 credits
- ARCH 426 Identity of Contemporary Places, 3 credits
- ARCH 428 Foreign Study History, 3 credit
- ARCH 451 Design for the Community, 3 credits
- ARCH 471 Directed Research/Creative Activity, 1-6 credits
- ARCH 472 Directed Research/Creative Activity Instructions, 1-2 credits
- ARCH 490R Undergraduate Research/Creative Activity, 1-6 credits
- ARCH 491 Special Topics, 1-4 credits
- ARCH 492 Independent Study, 1-3 credits
- ARCH 494 Seminar, 1-2 credits
- ARCH 521 Architectural Theory, 3 credits
- ARCH 522 Historical Issues in Architecture and Urban Design, 3 credits
- ARCH 523 Issues in City Planning, 3 credits
- ARCH 524 Design Competition, 3 credits
- ARCH 525 Special Design Topic, 3 credits

ARCH 533	Advanced Environmental Control Systems, 3 credits
ARCH 543	Advanced Applied Design and Construction, 3 credits
ARCH 564	Advanced Architectural Graphics, 3 credits
ARCH 565	Advanced Computer Applications II, 3 credits
ARCH 589	Graduate Consultation, 1-3 credits
ARCH 591	Special Topics, 1-4 credits
ARCH 592	Independent Study, 1-4 credits
ARCH 594	Seminar, 1 credit

Following is a list of the architectural electives listed in the undergraduate and graduate catalogs that have not been offered since the last accreditation visit. We will be reviewing these electives in our 2014-16 catalog and determine which courses should remain.

ARCH 221	World Architecture: Contemporary, 3 credits
ARCH 223	Introduction to Architectural Theory, 3 credits
ARCH 424	Contemporary Architectural History and Theory, 3 credits
ARCH 425	Western Architectural History, 3 credits
ARCH 427	Non-Western Architectural History, 3 credits
ARCH 444	Computational Design for Structures, 3 credits
ARCH 464	Intermediate Computer Applications, 3 credits
ARCH 465	Advanced Computer Applications, 3 credits
ARCH 545	Advanced Structures, 3 credits
ARCH 553	Architectural Studio-Theoretical Application, 3 credits
ARCH 554	Urban Design Studio, 6 credits
ARCH 555	Urban Design Research/Studio, 3 credits
ARCH 556	Construction Theory, 3 credits

Curriculum – NEW in FALL 2014

Following is the 168 credit curriculum waiting for approval by the Board of Regents for implementation Fall 2014.

Bachelor of Arts in Environmental Design

- 126 Credits Minimum

Pre-Environmental Design Program

First Year

Fall Semester			Spring Semester		
ARCH 121IA	Intro to Design	3	ARCH 152	Design Fundamentals II	4
ARCH 151RA	Design Fundamentals I	4	PHYX 205	College Physics I	4
M 151Q	PreCalculus	4		University Core (W, US, D, CS, R/IH, R/IN, or R/IS)	9
	University Core (W, US, D, CS, R/IH, R/IN, or R/IS)	3			
Total		14	Total		17

Environmental Design Program

Second Year

Fall Semester			Spring Semester		
ARCH 241	Building Construction I	3	ARCH 254	Architectural Design II	5
ARCH 253	Architectural Design I	5	ARCH 262	Architectural Graphics II	3
ARCH 261	Architectural Graphics I	3	ARCH322IA	World Arch II	3
ARCH322IA	World Arch I	3		University Core (W, US, D, CS, R/IH, R/IN, or R/IS)	3
	University Core (W, US, D, CS, R/IH, R/IN, or R/IS)	3			
Total		17	Total		14

Third Year

Fall Semester			Spring Semester		
ARCH 331	Environmental Controls I	4	ARCH 332	Environmental Controls II	4
ARCH 343	Architectural Structures I	4	ARCH 340	Building Construction II	4
ARCH 355	Architectural Design III	5	ARCH 344	Architectural Structures II	4
ARCH 363	Architectural Graphics III	3	ARCH 356	Architectural Design IV	5
Total		16	Total		17

Fourth Year

Fall Semester			Spring or Summer Semester		
ARCH 450	Community Design Center	5	ARCH 413	Professional Practice	3
or			ARCH 452	Research Methods in Arch	3
ARCH 414	Arch Study Abroad		ARCH 457	Architectural Design V	5
ARCH 428	Foreign Study History			Non-Arch Electives	6
or					
ARCH 458	Arch Design				
or					
ARCH 498	Internship				
and					
ARCH 431	Sustainability in Arch	3			
	Non-Arch Electives	3			
	University Core (W, US, D, CS, R/IH, R/IN, or R/IS)	3			
Total		14	Total		17

Master of Architecture - 42 Credit Minimum

Fall Semester			Spring Semester		
ARCH 558	Comp Design Studio	6	ARCH 551	Advanced Arch Studio	6
ARCH 535	Adv Bldg Systems Integrat	3	ARCH 575	Research Paper/Project	4
ARCH 526	Adv Arch Theory	3		Arch Grad Electives	3
	Non-Arch Grad Elective	3		Non-Arch Grad Electives	2
Total		15	Total		15

Fall Semester		
ARCH 560	Masters Studio Project	6
	Arch Grad Elective	4
	Non-Arch Grad Electives	2
Total		12

Students who complete the 45 non-architecture requirement prior to their start of the M.Arch program may substitute architecture graduate electives for non-architecture graduate electives.

Curriculum: General Studies, Professional Studies, Non-Architecture Electives - NEW in FALL 2014

The new required curriculum can be broken down into the following areas:

Pre-Environmental Design Program

First Year

Course	Credits	General Studies	Professional Studies	Non-Arch. Electives
ARCH 121IA Intro to Design	3		3	
ARCH 151RA Design Fundamentals I	4		4	
ARCH 152 Design Fundamentals II	4		4	
M151Q PreCalculus	4	4		
PHYX 205N College Physics I	4	4		
University Core(s)	12	12		
<i>Sub-Total Pre-Professional Program</i>	<i>31</i>	<i>20</i>	<i>11</i>	<i>0</i>

Environmental Design Program

Second Year

Course	Credits	General Studies	Professional Studies	Non-Arch. Electives
ARCH 241 Building Construction I	3		3	
ARCH 253 Architectural Design I	5		5	
ARCH 254 Architectural Design II	5		5	
ARCH 261 Architectural Graphics I	3		3	
ARCH 262 Architectural Graphics II	3		3	
ARCH 322IA World Arch I	3		3	
ARCH 323IA World Arch II	3		3	
University Core(s)	6	6		
<i>Sub-Total Second Year</i>	<i>31</i>	<i>6</i>	<i>25</i>	<i>0</i>

Third Year

Course	Credits	General Studies	Professional Studies	Non-Arch. Electives
ARCH 331 Environmental Controls I	4		4	
ARCH 332 Environmental Controls II	4		4	
ARCH 340 Building Construction II	4		4	
ARCH 343 Arch Structures I	4		4	
ARCH 344 Arch Structures II	4		4	
ARCH 355 Architectural Design III	5		5	
ARCH 356 Architectural Design	5		5	
ARCH 363 Architectural Graphics III	3		3	
<i>Sub-Total Third Year</i>	<i>33</i>	<i>0</i>	<i>33</i>	<i>0</i>

Fourth Year

Course	Credits	General Studies	Professional Studies	Non-Arch. Electives
ARCH 413 Professional Practice	3		3	
ARCH 431 Sustainability in Arch	3		3	
ARCH 452 Research Methods in Arch	3		3	
ARCH 457 Architectural Design V	5		5	
Non-Architectural Electives	9			9
Required Fourth Year Design Studio Options* ARCH 414 Arch. Study Abroad ARCH 450 Community Design Center ARCH 458 Architectural Design VI ARCH 476 Internship	5		5	
University Core(s)	3	3		
<i>Sub-Total Fourth Year</i>	<i>31</i>	<i>3</i>	<i>19</i>	<i>9</i>

Master of Architecture Program**Graduate Year**

Course	Credits	General Studies	Professional Studies	Non-Arch. Electives
ARCH 526 Adv Arch Theory	3		3	
ARCH 535 Adv Bldg Systems Integration	3		3	
ARCH 551 Advanced Architectural Studio	6		6	
ARCH 558 Comprehensive Design Studio	6		6	
ARCH 560 Master Studio Project	6		6	
ARCH 575 Research Paper/project	4		4	
Architectural Electives	7		7	
Non-Architectural Electives	7			7
<i>Sub-Total Graduate Level</i>	<i>42</i>	<i>0</i>	<i>35</i>	<i>7</i>

Total Semester Undergraduate Credits required for the Bachelor of Arts in Environmental Design Degree: 126

Total Semester Graduate Credits required for Master of Architecture Degree: 42

*During the fourth and graduate years of design, students have a wide range of options available to satisfy the studio requirement.

Credit Distribution Summary

Year of Program	Credits	General Studies	Professional Studies	<i>Non-Arch.</i> Electives
First Year	31	20	11	-
Second Year	31	6	25	-
Third Year	33	-	33	-
Fourth Year	31	3	19	9
Graduate Level	42	-	35	7
Total	168	29	123	16

The total required General Studies courses and the Non-Architectural Electives comprise 45 credits of the new 168 credit Master of Architecture degree program at MSU.

Required Fourth Year Design Studio Options

Fourth year students are required to take one design studio—ARCH 457 Architectural Design V in Bozeman. In the fourth year of the program students must select a Fourth Year Design Studio Option which is selected from the choices below:

- ARCH 414 Architectural Study Abroad--taken with ARCH 428 Foreign Study History as a co-requisite, 12 credits total
- ARCH 450 Community Design Center, 5 credits
- ARCH 458 Architectural Design VI, 5 credits
- ARCH 498 Architectural Practice Internship, 12 credits

Architectural Electives

In addition to the current list of electives in our current catalog the following graduate electives will be added to our program in the 2014-16 Graduate Catalog

- ARCH 510 Leadership in Professional Practice, 3 credits
- ARCH 519 Synthesis of Architectural Practice, 3 credits
- ARCH 527 Architecture: Meaning and Place, 3 credits
- ARCH 556 Interior Design for Architects, 3 credits
- ARCH 566 Photography for Architects, 3 credits

Minors or Concentrations

As part of the Studio Culture Survey completed in Spring 2013, 25.9% of our students responded that they are pursuing a minor or second degree in addition to their studies in Environmental Design and Architecture. The most common minors are Business Administration, Business Entrepreneurship, Photography, and Spanish. The School is currently working on a proposal to create a Historic Preservation Certificate for our students. The number of students pursuing a double major is smaller—typically 5-10%. The double majors that students have pursued in the past have been Structural Engineering, Religious Studies, German Literature, Spanish and Business.

A Professional Practice in Architecture Graduate Certificate program has been developed and is being offered in Fall 2013 for the first time. While this program targets graduates of our program, some students currently in our graduate program with prior work experience would be qualified to take this certificate program.

As mentioned previously, all students have access to DegreeWorks which tracks their progress toward completing our undergraduate and graduate degree programs. The “What If” option in DegreeWorks allows students to quickly explore what courses would be required for them to pursue additional degrees or minors. The “What If” option is discussed with students at their Freshman Orientation session and at each subsequent semester’s group advising sessions.

Off-campus Programs

The School of Architecture does not currently have any off-campus programs.