BUTLER UNIVERSITY • DEPARTMENT OF ART

B.A. IN ART + DESIGN *PLUS* A SECONDARY MAJOR IN SOFTWARE ENGINEERING

• The B.A. degree in Art + Design requires 120 credits.
   --40 hours must be 300 or 400-level courses.
   --All art majors have Arts Event Attendance Requirements; for details, check
      https://www.butler.edu/jca/for-current-students.

• The double major of Art + Design and Software Engineering will fulfill the following Areas of Inquiry in the University Core Curriculum: Perspectives of the Creative Arts and Analytic Reasoning. In addition, the B.A. Art + Design curriculum fulfills the Indianapolis Community Requirement of the Butler University Core Curriculum; art majors fulfill the Butler Cultural Requirement because of the arts event attendance requirements for all arts majors.

• Students are encouraged to add a track to their Software Engineering major; the additional requirements are listed at the end of the summary.

• The student will be assigned a Software Engineering advisor in addition to their Art advisor.

Semester 1

ART 105	Art History Survey 1	3
ART 107	Drawing 1	3
FYS 101	First Year Seminar	3
WB ____	Well-Being	1
CS 151	Foundations of Computing 1	3
MA 106*	Calculus & Anal. Geo. 1	4
TOTAL Credit Hours:		17

Semester 2

ART 205	Art History Survey 2	3
ART 210	Professional Practices	3
FYS 102	First Year Seminar	3
CS 248	Obj-Orient Program & Data Str	5
CS 252	Foundations of Computing 2	3
		17

Math placement test required; the student may need to take MA 101 (Algebra, 3 cr.) and/or MA 102 (Precalculus, 3 cr.) prior to MA 106. Students get credit for MA 106 if they receive a 4 or 5 on the Calculus AB AP exam; they receive credit for both MA 106 and MA 107 if they receive a 4 or 5 on the Calculus BC AP exam with a 4 or 5 on the AB subscore.

Semester 3

ART 308	Graphic Design 1	3
ART ____	Art Elective	3
GHS ____	Global and Historical Studies	3
CS 333	Database Systems	3
Language Elective		3

Semester 4

ART ____	Art Elective	3
ART ____	Art Elective	3
GHS ____	Global and Historical Studies	3
CS 341	Advanced Data Structures	3
SE 361	Intro to Software Engineering	3
Language Elective		3

Explanation: 6 hours of the same language at the 200-level or higher are required.

TOTAL Credit Hours:	15	18

Semester 5

ART ____	Art Elective	3
ART ____	Art Elective	3
SW ____	The Social World	3
CS 311	Voc Exploration in Comp Sci	1
CS 321	Computer Organization	3
CS 382/3	Epics 2 Service Learning	2-3
CS 485	Computer Ethics	1

Semester 6

ART ____	Art Elective	3
ART ____	Art Elective	3
CS 351	Algorithms	3
MA 162	Elementary Statistics	3

Semester 7

ART 453-ICR	Internship	3
NW ____	The Natural World	5
SE 411	Internship Practicum	1
SE 461	Managing Software Dev	3
SE 463	Testing & Quality Assurance	3
CS ____	CS 435 or CS 441	3
TOTAL Credit Hours:		18

Semester 8

ART 411	Thesis	3
TI ____	Texts and Ideas	3
SE 412	Internship Reflection	2
SE 462	Modernizing Legacy Software	3
CS/SE ____	300/400-level Elective	3
		14

SUMMARY

REQUIRED ART COURSES:

ART 105	Art History Survey 1	3
ART 107	Drawing 1	3
ART 205	Art History Survey 2	3
ART 210	Professional Practices	3
ART 308	Graphic Design 1	3
ART 411	Thesis	3
ART 451/2/3-ICR	Internship	3
TWENTY-ONE credits chosen from the following:		21 (maximum of 9 in Art History*)
ART 207,307	Drawing 2,3	3,3
ART 303,313,323,423	Photography 1,2,3,4	3,3,3,3
ART 304	Depiction	3
ART 305	Animation + Video	3
ART 306	Cyanotype	3
ART 311	Function	3
ART 312*	Design: History and Theory	3
ART 314*	Art Museum Studies	3
ART 315*	Postmodernism in the Arts	3
ART 316*	Modernism in the Arts	3
ART 317-SJD*	American Art and Visual Culture	3
ART 318,328	Graphic Design 2,3	3,3
ART 319-SJD*	World History of Photography	3
ART 320-SJD*	Race, Gen & Sexuality in Cont Art	3
ART 321*	Art of Asia	3
ART 322,332,342	Painting 1,2,3	3,3,3
ART 330*	Art of Africa	3
ART 360	Sculpture	3
ART 370	Studio Practicum	3
ART 380/1/2	Special Topics in Art and Visual Cult	1,2,3
ART 401/2/3	Independent Study	1,2,3
ART 499	Honors Thesis	3
NW 216-ART	Science and Photography	5
	TOTAL	*42*

UNIVERSITY CORE CURRICULUM:

FYS 101,102	First Year Seminar	3,3
GHS ____	Global and Historical Studies	3,3
NW ____	The Natural World	5
SW ____	The Social World	3
TI ____	Texts and Ideas	3
WB ____	Well-Being	1
	TOTAL	*24*

COURSES REQUIRED FOR THE SOFTWARE ENGINEERING MAJOR:

CS 151	Foundations of Computing 1	3
CS 248	Object-Oriented Prog & Data Structures	5
CS 252	Foundations of Computing 2	3
CS 311	Vocational Exploration in Computer Science	1
CS 321	Computer Organization	3

CS 333	Database Systems	3
CS 341	Advanced Data Structures	3
CS 351	Algorithms	3
CS 382/383	Epics 2 Service Learning	2-3
CS 485	Computer Ethics	1
MA 106*	Calculus & Anal Geometry 1	4
MA 162	Elementary Statistics	3
SE 361	Introduction to Software Engineering	3
SE 411	Internship Practicum	1
SE 412	Internship Reflection	2
SE 461	Managing Software Development	3
SE 462	Modernizing Legacy Software	3
SE 463	Testing and Quality Assurance	3
ONE of the following, chosen from:		3
CS 435	Computer Networks	
CS 441	Organization of Programming Languages	
CS/SE _____	Elective numbered 300 or above	3
Language	6 hours of the same language at the 200-level or higher	
	TOTAL	***61-62***

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ADDITIONAL COURSES REQUIRED FOR OPTIONAL TRACKS:

Artificial Intelligence Track
CS 445	Artificial Intelligence (3)
CS 446	Artificial Intelligence 2 (3)
CS 448	Deep Learning and Computer Vision (3)

Cybersecurity Track
CS 435	Computer Networks (3)
CS 439	Hacking: Ethics and Practice (3)
CS 458	Introduction to Cryptography and Cryptanalysis (3)

Game Design Track
CS 445/447	Artificial Intelligence/Computer Graphics (3)
SE 342	Game Mechanics and Narrative Design (3)
SE 463	Testing and Quality Assurance (3)