BUTLER UNIVERSITY • DEPARTMENT OF ART

B.A. IN ART + DESIGN *PLUS* A SECONDARY MAJOR IN PHYSICS

• 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 Physics will fulfill the following Areas of Inquiry in the University Core Curriculum: Perspectives of the Creative Arts, The Natural World, 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.

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

Semester 1			***Semester 2***		
ART 105	Art History Survey 1	3	ART 205	Art History Survey 2	3
ART 107	Drawing 1	3	ART 210	Professional Practices	3
FYS 101	First Year Seminar	3	FYS 102	First year Seminar	3
WB ____	Well-Being	1			
MA 106*	Calculus & Anal. Geo. 1	4	MA 107	Calculus & Anal Geo. 2	4
PH 490	Colloquium	0	PH 490	Colloquium	0
Language Elective		3	Language Elective		3
Explanation: 6 hours of the same language at the 200-level or higher are required.					
TOTAL Credit Hours:		17			16

**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			***Semester 4***		
ART 308	Graphic Design 1	3	ART ____	Art Elective	3
ART ____	Art Elective	3	ART ____	Art Elective	3
GHS ____	Global and Historical Studies	3	GHS ____	Global and Historical Studies	3
MA 208	Calculus & Anal. Geo. 3	4	MA 310	Linear Algebra	3
PH 201	Intro to Anal. Physics 1	5	PH 202	Intro to Anal. Physics 2	5
PH 490	Colloquium	0	PH 490	Colloquium	0
TOTAL Credit Hours:		18			17

Semester 5			***Semester 6***		
ART ____	Art Elective	3	ART ____	Art Elective	3
ART ____	Art Elective	3	ART ____	Art Elective	3
AS 311**	Astrophysics 1	3	MA 334	Differential Equations	3
PH 301	Modern Physics	3	PH 303	Electromag Waves & Optics	3
PH 331	Electromagnetic Theory	4	PH 311	Experiment Modern Physics	3
PH 490	Colloquium	0	PH 315**	Math Methods for Physics	4
			PH 490	Colloquium	0
TOTAL Credit Hours:		16			19

**Not required for the Physics major, but recommended for students considering graduate school in Physics.

Semester 7			***Semester 8***		
ART 453-ICR	Internship	3	ART 411	Thesis	3
TI ____	Texts and Ideas	3	SW ____	The Social World	3
AS 340**	Cosmol & Extragal Astrophy	3	PH 321	Inter Classical Mechanics	4
PH 421	Quantum Theory	4	PH 325	Therm & Statistical Physics	4
PH 461**	Computational Physics	3	PH 422**	Quantum Theory 2	4
PH 490	Colloquium	0	PH 490	Colloquium	0
PH 495	Senior Seminar	1			
TOTAL Credit Hours:		17			18

**Not required for the Physics major, but recommended for students considering graduate school in Physics.

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
SW ____	The Social World	3
TI ____	Texts and Ideas	3
WB ____	Well-Being	1
	TOTAL	***19***

COURSES REQUIRED FOR THE PHYSICS MAJOR:

NOTE: Many upper-level physics courses require one or more of the following math courses as prerequisites (included in the plan above):

MA 106*	Calculus & Anal Geometry 1	4
MA 107	Calculus & Anal Geometry 2	4
MA 208	Calculus & Anal Geometry 3	4
MA 310	Linear Algebra	3

MA 334	Differential Equations	3	
PH 201	Introduction to Analytical Physics 1		5
PH 202	Introduction to Analytical Physics 2		5
PH 301	Modern Physics		3
PH 303	Electromagnetic Waves and Optics		3
PH 311	Experimental Modern Physics		3
PH 321	Intermediate Classical Mechanics		4
PH 325	Thermodynamics and Statistical Physics		4
PH 331	Electromagnetic Theory		4
PH 421	Quantum Theory		4
PH 490	Colloquium (every semester)		0
PH 495	Senior Seminar		1
TWO AS/PH Electives, chosen from:			6-8
AS 301	Modern Astronomical Tech with lab	3	
AS 311	Astrophysics 1	3	
AS 312	Galactic Astrophysics 2	3	
AS 340	Cosmology & Extragalactic Astrophy	3	
PH 315	Mathematical Methods for Physics	4	
PH 351	Analog Electronics 1	4	
PH 422	Quantum Theory 2	4	
PH 427	General Relativity and Gravity 1	3	
PH 461	Computational Physics	3	
PH 480	Special Topics	3	
Language	6 hours of the same language at the 200-level or higher		
	TOTAL		***48-50 (plus 18 additional math credits, if necessary)***

**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.*

Additional courses recommended for students going to graduate school in Physics (included in the plan above, and fulfill the AS/PH Elective requirement):

AS 311	Astrophysics 1	3
AS 340	Cosmology & Extragalactic Astrophy	3
PH 315	Mathematical Methods for Physics	4
PH 422	Quantum Theory 2	4
PH 461	Computational Physics	3