

Biology Concentration
Effective Fall 2015

IUPUI – FORENSIC AND INVESTIGATIVE SCIENCES PROGRAM

These courses are required for all students in the FIS program, www.forensic.iupui.edu

SCI-I 120 Windows on Science or other Learning Comm.	1 cr. _____	FIS 43000 Population Genetics	3 cr. <u>sp</u>
CORE COMMUNICATION - 9 cr.		FIS 41500 Forensic Science and the Law	3 cr. _____
(Grade of a C or better in each composition course)		FIS 49000 Capstone in Forensic Science	2 cr. <u>fa</u>
English Composition (Core 30)		Required Biology Courses - 23 credits	
ENG-W 131 (ENG-W 140) English Composition I	3 cr. _____	BIOL-K 101 Concepts of Biology I	5 cr. _____
Speech Communication – (Core 30)		BIOL-K 103 Concepts of Biology II	5 cr. _____
COMM-R 110 Speech Communication	3 cr. _____	BIOL-K 322 Genetics & Molecular Biology	3 cr. _____
Advanced Composition- (SOS)		BIOL-K 323 Genetics & Molecular Biology Lab	2 cr. <u>fa</u>
ENG-W 270, ENG-W 231, ENG-W 230 or TCM 32000	3 cr. _____	BIOL-K 324 Cell Biology	3 cr. _____
		BIOL-K 325 Cell Biology Laboratory	2 cr. <u>sp</u>
		BIOL-K 384 Biochemistry	3 cr. _____
FOREIGN LANGUAGE		Required Chemistry Courses - 10 credits	
A foreign language is not required for BS degrees.		CHEM-C 341 Organic Chemistry I	3 cr. _____
CULTURAL UNDERSTANDING—3 cr.		CHEM-C 343 Organic Chemistry Lab I	2 cr. _____
Cultural Understanding (Core 30)	3 cr. _____	CHEM-C 342 Organic Chemistry II	3 cr. _____
(Foreign Language if pursuing BA in Chemistry or Biology, 4 cr.)		CHEM-C 344 Organic Chemistry Lab II	2 cr. _____
ARTS/HUMANITIES (AH) AND SOCIAL SCIENCES (S)—9 cr.		Required Statistics Course - 3 credits	
AH (Core 30): _____	3 cr. _____	STAT 30100 Elementary Statistical Methods	3 cr. _____
S (Core 30): _____	3 cr. _____	Advanced Science Courses – Choose 9 credits (minimum)	
AH or S (Core 30): _____	3 cr. _____	Check prerequisites at www.bulletin.iupui.edu .	
		ANTH-B 426 Human Osteology	3cr. <u>varies</u>
LIFE AND PHYSICAL SCIENCES—10 cr.		ANTH-B 460 Forensic Anthropology or Bio-Archaeology	
PHYS-P 201 General Physics I (Core 30/SOS)	5 cr. _____	(ONLY these two topics)	3cr. <u>vary</u>
PHYS-P 202 General Physics II (Core 30/SOS)	5 cr. _____	BIOL-K 331 Embryology	3cr. _____
		BIOL-K 333 Embryology Laboratory	1cr. _____
PHYSICAL AND BIOLOGICAL SCIENCES--10 cr.		BIOL-K 338 Introductory Immunology	3cr. _____
CHEM-C 105 Principles of Chemistry I (SOS)	3 cr. _____	BIOL-K 339 Immunology Lab	2cr. _____
CHEM-C 125 Experimental Chemistry I (SOS)	2 cr. _____	BIOL-K 356 Microbiology	3cr. _____
CHEM-C 106 Principles of Chemistry II (SOS)	3 cr. _____	BIOL-K 357 Microbiology Laboratory	2cr. <u>sp</u>
CHEM-C 126 Experimental Chemistry II (SOS)	2 cr. _____	BIOL-K 341 Principles of Ecology and Evolution	3cr. <u>fa/even sp</u>
ANALYTICAL REASONING—6 cr.		BIOL-K 342 Principles of Ecology and Evolution Lab	2cr. <u>fa</u>
MATH 23100 Calculus for Life Science I (Core 30/SOS)	3 cr. _____	BIOL-K 411 Global Change Biology	3cr. <u>odd sp</u>
MATH 23200 Calculus for Life Sciences II (Core 30/SOS)	3 cr. _____	BIOL-N 217 Human Physiology	5cr. _____
		BIOL-N 261 Human Anatomy	5cr. _____
COMPUTER SCIENCE PROGRAMMING—3 cr.		CHEM-C 310 Analytical Chemistry	3cr. _____
Select from the following:		CHEM-C 311 Analytical Chemistry Lab	1cr. _____
CSCI-N 201, N 207 (recommended), N 211, N 301, or N 199 ONLY		CHEM-C 360 Elementary Physical Chemistry	3cr. <u>sp</u>
topic: Computer Programming Principles (SOS)	3 cr. _____	CHEM-C 325 Introductory Instrumental Analysis	5cr. <u>sp</u>
MAJOR COURSES--75 cr.		CHEM-C 384 Biochemistry	3cr. _____
Students must have a grade of C- or higher for courses listed in the		CHEM-C 430 Inorganic Chemistry	3cr. <u>sp</u>
major courses area except FIS courses (see below)		CHEM-C 435 Inorganic Chemistry Lab	1cr. <u>sp</u>
		CHEM-C 485 Biosynthesis and Physiology	3cr. _____
Required Forensic Science Courses – 30 credits		CHEM-C 486 Biological Chemistry Lab	2cr. _____
(Grade of C or better in each FIS course; No grade below C accepted)		FIS 40100 Forensic Chemistry I	3cr. <u>fa</u>
FIS 20500 Concepts of Forensic Science I	3 cr. <u>fa/ss</u>	FIS 40101 Forensic Chemistry I Lab	1cr. <u>fa</u>
FIS 20600 Concepts of Forensic Science II	3 cr. <u>sp/ss</u>	FIS 40400 Forensic Chemistry II	3cr. <u>sp</u>
FIS 30500 Professional Issues in Forensic Science	3 cr. _____	FIS 40401 Forensic Chemistry II Lab	1cr. <u>sp</u>
FIS 30600 Forensic Microscopy	3 cr. _____	FIS 49600 Special Topics in Forensic Science (ALL topics)	1-3cr. _____
FIS 40200 Forensic Biology	3 cr. <u>fa</u>	GEOL-G 306 Earth Materials	4cr. _____
FIS 40201 Forensic Biology Lab	2 cr. <u>fa</u>	SPEA-J 260 Topics in Criminal Justice	1cr. _____
FIS 40300 Forensic Genetics	3 cr. <u>sp</u>	(ONLY Investigating Post Blast Crime Scene, Indiana Homicide, and	
FIS 40301 Forensic Genetics Lab	2 cr. <u>sp</u>	Death Investigation)	
		ELECTIVES	
		FIS requires no electives. Total: 126 cr.	

GENERAL INFORMATION

1. Courses taken Pass/Fail do not count toward any degree area requirements of the school or department.
2. A minimum of 120 credit hours must be completed for graduation. This total must include at least 32 credit hours in courses at the 300-level or above taken at the IUPUI campus. Residence (not living but taking courses on the IUPUI campus) of at least two semesters at the IUPUI campus is also required for graduation.
3. Some of the courses listed may have prerequisites that are not part of the required course list. Check with the FIS advisor to make sure you have the necessary prerequisites.
4. The following are acceptable substitutes. Always check with your advisor before officially choosing a substitute.
MATH 16500 & 16600 – Can substitute for MATH 23100 & 23200/MATH 22100 & 22200 – Can substitute for MATH 23100 & 23200
PHYS 15200 & 25100 – Can substitute for PHYS-P 201 & P 202
5. To contact the FIS Academic Advisor, call 317-274-6882 or email forsci@iupui.edu. To schedule an appointment, go to <http://science.iupui.edu/advising>.

Cultural Understanding

AFRO-A 140 INTRODUCTION TO AFRICAN AMERICAN AND AFRICAN DIASPORA STUDIES

AFRO-A 150 CULTR OF BLACK AMERICANS

AFRO-A 152 INTRO TO AFRICAN STUDIES

AMST-A 101 INTRO TO AMERICAN STUDIES

ANTH-A 104 CULTURAL ANTHROPOLOGY

EDUC-E 201 MULTICULT EDUC/GLOBAL AWARENS

ENG-L 207 WOMEN AND LITERATURE

ENG-L 245 INTRO TO CARIBBEAN LIT

HER-H 221 ART PAST AND PRESENT

INTL-I 100 INTRO TO INTERNATL STUDIES

LATS-L 101 INTRO TO LATINO STUDIES

LATS-L 228 AN INTERDISCIPLINARY LOOK AT U.S. LATINO/A IDENTITIES

MUS-M 394 SURVEY OF AFRICAN AMERICAN MUSIC

MUS-Z 105 TRADITIONS IN WORLD MUSIC

NAIS-N 101 INTRODUCTION TO NATIVE AMERICAN INDIGENOUS STUDIES

PSY-B 203 ETHICS AND DIVERSITY IN PSY

REL-R 101 RELIGION AND CULTURE

SWK-S 102 UNDERSTANDING DIVERSITY IN A PLURALISTIC SOCIETY

TCM 18000 EXPLORING INTERCULTURAL TECHNICAL COMMUNICATION

TCEM-T 208 GLOBAL TOURISM GEOGRAPHY

TCEM-T 234 CULTURAL HERITAGE TOURISM

FOREIGN LANGUAGES

AMERICAN SIGN LANGUAGE: ASL-A 131, A 132, A 211, A 212

ARABIC: NELC-A 131, A 132, A 200, A 250

CHINESE: EALC-C 117, C 131, C 132, C 201, C 202

FRENCH: FREN-F 117, F 131, F 132, F 203, F 204

GERMAN: GER-G 117, G 131, G 132, G 203, G 204

ITALIAN: ITAL-M 131, M 132, M 200, M 250

JAPANESE: EALC-J 131, J 132, J 201, J 202

LATIN: CLAS-L 131, L 132, L 200, L 250

SPANISH: SPAN-S 117, S 131, S 132, S 203, S 204

Arts and Humanities (AH)

ART 21000 HIST OF ARCHITECTURE I

CLAS-C 101 ANCIENT GREEK CULTURE

CLAS-C 102 CLASSICAL MYTHOLOGY

CLAS-C 205 CLASSICAL MYTHOLOGY

COMM-T 130 INTRODUCTION TO THEATRE

ENG-L 105 APPRECIATION OF LITERATURE

ENG-L 202 LITERARY INTERPRETATION

ENG-L 203 INTRODUCTION TO DRAMA

ENG-L 205 INTRODUCTION TO POETRY

ENG-L 207 WOMEN AND LITERATURE

ENG-L 115 LITERATURE FOR TODAY

ENG-L 213 LITERARY MASTERPIECES I

ENG-L 214 LITERARY MASTERPIECES II

ENG-W 206 INTRODUCTION TO CREATIVE WRITING

ENG-W 207 INTRODUCTION TO FICTION WRITING

ENG-W 208 INTRODUCTION TO POETRY WRITING

ENG-W 210 LITERACY AND PUBLIC LIFE

FILM-C 292 INTRODUCTION TO FILM

HER-E 101 BEGINNING DRAWING I

HER-E 105 BEGINNING PAINTING I

HER-E 109 COLOR & DESIGN NON-ART MAJOR

HER-E 111 METALSMITHING AND JEWELRY DESIGN

HER-E 201 PHOTOGRAPHY I

HER-E 209 DRAWING FOR INTERIOR DESIGN

HER-E 214 VISUAL LEARNING: FROM THE SIMPSONS TO THE GUERRILLA GIRLS

HER-H 100 ART APPRECIATION

HER-H 101 HISTORY OF ART I

HER-H 102 HISTORY OF ART 2

HER-H 200 UNDERSTANDING CONTEMPORARY ART

HER-H 210 THE ART OF ART HISTORY

HER-V 214 HISTORY OF VISUAL COMMUNICATION

MHHS-M 201 INTRO TO MED HUM & HEALTH STUDIES

MSTD-A 101 UNDERSTANDING MUSEUMS

MUS-E 241 INTRO TO MUSIC FUND

MUS-L 100 GUITAR ELECT/SECONDARY

MUS-L 101 BEGINNING GUITAR CLASS

MUS-M 174 MUSIC FOR THE LISTENER

MUS-Z 201 HIST OF ROCK & ROLL MUSIC

NEWM-N 100 FOUNDATIONS OF NEW MEDIA

NEWM-N 201 DESIGN ISSUES IN DIGITAL MEDIA

PHIL-P 110 INTRO TO PHILOSOPHY

PHIL-P 120 ETHICS

PHST-P 105 GIVING & VOL IN AMER

REL-R 133 INTRODUCTION TO RELIGION

REL-R 173 AMERICAN RELIGION

REL-R 180 INTRODUCTION TO CHRISTIANITY

REL-R 212 COMPARATIVE RELIGIONS

REL-R 243 INTRODUCTION TO THE NEW TESTIMENT

REL-R 257 INTRODUCTION TO ISLAM

Social Sciences (S)

BUS-F 260 PERSONAL FINANCE

(Note: BUS-F 260 is equivalent to F-151, F-152, and F-153, combined)

BUS-F 151 (1 cr.), **F 152** (1 cr.), **F 251** (1cr.)

BUS-W 200 BUS/MGMT, X 100

BUS-X 100 BUS ADMINISTRATION: INTRO

COMM-C 180 INTRO TO INTERPER COMM

COMM-M 150 MASS MED & CONTEMP SOC

ECE 32700 ENGINEERING ECONOMICS

ECON-E 101 SURVEY OF ECONOMIC ISS & PRB

ECON-E 201 INTRO TO MICROECONOMICS

ECON-E 202 INTRO TO MACROECONOMICS

EDUC-P 251 EDUC PSY FOR ELEM TCHRS

ENG-Z 104 LANGUAGE IN OUR WORLD

ENG-Z 205 INTRO TO THE ENGLISH LANGUAGE

FOLK-F 101 INTRODUCTION TO FOLKLORE

GEOG-G 110 INTRO TO HUMAN GEOGRAPHY

GEOG-G 130 WORLD GEOGRAPHY

HIST-H 105 AMERICAN HISTORY I

HIST-H 106 AMERICAN HISTORY II

HIST-H 108 PERSPECTIVES: WORLD TO 1800

HIST-H 109 PERSPECT: WORLD 1800-PRES

HIST-H 113 HISTORY OF WESTERN CIVILIZ 1

HIST-H 114 HISTORY OF WESTERN CIVILIZ 2

HPER-F 255 HUMAN SEXUALITY

HPER-F 258 MARRIAGE & FAMILY INTERACTION

HPER-H 195 PRIN OF LIFESTYLE WELLNESS

INFO-I 202 SOCIAL INFORMATICS

INFO-I 270 INTRO TO HUMAN-COMP INTERACTION PRIN & PRACTICES

INFO-I 275 INTRO TO HUMAN-COMPUTER INTERACTION THEORY

JOURN-J 110 FOUNDATIONS OF JOURNALISM & MASS COMM

ME 32700 ENGINEERING ECONOMICS

OLS 25200 HUMAN BEHAVIOR IN ORGANIZATIONS

OLS 26300 ETHICAL DECISIONS IN LEADERSHIP

OLS 27400 APPLIED LEADERSHIP

POLS-Y 101 INTRODUCTION TO POL SCI

POLS-Y 103 INTRO TO AMERICAN POLITICS

POLS-Y 217 INTRO TO COMP POL

POLS-Y 219 INTRO TO INTNL RELATIONS

PSY-B 110 INTRODUCTION TO PSYCHOLOGY

SOC-R 100 INTRODUCTION TO SOCIOLOGY

SOC-R 121 SOCIAL PROBLEMS

SPEA-J 101 AMERICAN CRIMINAL JUSTICE SYS

SPEA-J 150 PUBLIC SAFETY IN AMERICA

SPEA-V 170 INTRO TO PUBLIC AFFAIRS

SPEA-V 221 NONPROFIT & VOLUNTARY

SPEA-V 222 PRINCIPLES OF SUSTAINABILITY

SWK-S 221 HUMAN GROWTH AND DEV IN THE SOCIAL ENVIRONMENT

SWK-S 251 HIST AND ANALYSIS OF SOC WELFARE POLICY

WOST-W 105 INTRO TO WOMEN'S STUDIES