

**GEORGE MASON UNIVERSITY - COLLEGE OF SCIENCE**  
**B.S. DEGREE IN BIOLOGY – CONCENTRATION IN BIOLOGY EDUCATION**  
(1200 Exploratory Hall, 703-993-1050)  
**2014-2015 Catalog**

Completed	<b>GENERAL EDUCATION REQUIREMENTS (27)</b>	Course	Grade
	ENGH 101 (100) (3)		
	COMM (3) (100 or 101)		
N/A	Quantitative Reasoning (satisfied by completion of major requirements)	XXXX	XXXX
	Literature (3)*		
	Fine Arts (3)*		
	Western Civilization HIST 100 or HIST 125 (3)		
N/A	Social and Behavioral Science (3) (satisfied by completion of major requirements)	XXXX	XXXX
N/A	Natural Science Sequence (satisfied by completion of major requirements)	XXXX	XXXX
	Global Understanding (3) <sup>2,4*</sup>		
N/A	Information Technology (satisfied by completion of major requirements)	XXXX	XXXX
	ENGH 302 (C or better) (3)		
N/A	Synthesis (3) (satisfied by completion of major requirements)	XXXX	XXXX

\*A listing of courses satisfying many of the general education requirements can be found on the reverse side of this sheet

**MAJOR REQUIREMENTS: BIOLOGY [CORE] (22)**

	BIOL 213 (4) <b>Cell Biology</b>		
	BIOL 214 (4) <b>Introduction to Biostatistics</b>		
	BIOL 311 (4) <b>General Genetics</b> (Prerequisites: BIOL 213. BIOL 214 is recommended)		
	BIOL 308 (5) <b>Foundations of Ecology and Evolution</b> (Prerequisite: BIOL 213, 214, BIOL 311 is recommended) Writing Intensive		
	BIOL 310 (5) <b>Biodiversity</b> (Prerequisite: BIOL 213, 214, BIOL 311 is recommended)		

**MAJOR REQUIREMENTS: BIOLOGY ELECTIVES (16)**

	BIOL430 Advanced Human Anatomy and Physiology I (4)		
	BIOL431 Advanced Human Anatomy and Physiology II (4)		
	8 credits of additional biology courses of which 4 credits must be from upper division courses. BIOL 124 and 125 are not eligible to fulfill this requirement		
A. BIOL	B. BIOL	C. BIOL	

**MAJOR SUPPORTING REQUIREMENTS (30-36)**

	CHEM 211, 212 (8) <b>General Chemistry</b>		
	CHEM 313, 315 (5) <b>Organic Chemistry I</b>		
	CHEM 314, 318 (5) or GEOL101, 102 (8) or CHEM 300-400 (not314) (3)		
	PHYS 243, 244 and 245, 246 (8)		
	One of the following MATH 111, 113, or 114		
	CDS130 (3) or IT103 (3)		

**Teacher Licensure Requirement (21)**

	EDCI473 (3) <b>Teaching Science in the Secondary School</b>		
	EDCI483 (3) <b>Advanced Methods in Teaching Science in the Secondary School</b>		
	EDUC372 (3) <b>Human Development. Learning and Teaching</b> (Fulfills social/behavioral)		
	EDUC422 (3) <b>Foundations of Secondary Education</b>		
	EDRD419 (3) <b>Literacy in the Content Areas</b>		
	EDCI490 (6) <b>Student Teaching in Education</b> (Fulfills synthesis requirement)		

**MINIMUM HOURS TO GRADUATE: 120**

**UPPER DIVISION CREDITS (300+ level) (minimum 45)**

**Minimum GPA: (overall 2.00, Major 2.0** [Biology majors must earn a minimum grade of C in all biology core courses listed above], **Supporting 2.0)**

This planning form is intended for use in consultation with your academic advisor; The Undergraduate Catalog is the official reference for program information. For advising appointments go to [www.biology.gmu.edu](http://www.biology.gmu.edu)

## Literature

ARAB 325 - Major Arab Writers/Stories  
CHIN 310 - Survey of Chinese Literature  
CHIN 311 - Modern Chinese Literature  
CHIN 325 - Major Chinese Writers  
CHIN 328 - Asian American Women Writers  
CLAS 250 - Classical Mythology  
CLAS 260 - Legacy of Greece and Rome  
CLAS 340 - Greek and Roman Epic  
CLAS 350 - Greek and Roman Tragedy  
CLAS 360 - Greek and Roman Comedy  
CLAS 380 - Greek and Roman Novels  
ENGL 201 - Reading and Writing -Texts  
ENGL 202 - Texts and Contexts  
ENGL 203 - Western Literary Tradition  
ENGL 204 - Western Literary Traditions  
FREN 325 - Major French Writers  
FREN 329 - Prob of West Civ French Lit  
FRLN 330 - Topics in World Literature  
GERM 325 - Major Writers  
ITAL 320- Topics in Italian Film and Literature  
ITAL 325 -Major Italian Writers  
JAPA 340- Topics in Japanese Literature  
PHIL 253 - Philosophy and Literature  
RELI 235 - Religion and Literature  
RUSS 325 - Major Russian Writers  
RUSS 326 - Survey of Russian Literature  
RUSS 327 - Survey of Russian Literature  
SPAN 325 - Major Hispanic Writers

## Fine Arts

ARTH 101 - Intro to the Visual Arts  
ARTH 102 - Symbols and Stories in Art  
ARTH 103 - Introduction to Architecture  
ARTH 200 - Survey of Western Art  
ARTH 201 - Survey of Western Art  
ARTH 203 - Survey of Asian Art  
ARTH 204 - Survey of Latin American Art  
ARTH 321 - Greek Art and Archaeology  
ARTH 322 - Roman Art and Archaeology  
ARTH 324 - The Hellenistic World  
ARTH 333 - Early Christian Byzantine Art  
ARTH 334 - Western Medieval Art  
ARTH 335 - Arts of Medieval England  
ARTH 340 - Early Renaissance Art in Italy  
ARTH 341 - Northern Renaissance Art  
ARTH 342 - High Renaissance Art Italy  
ARTH 344 - Baroque Art Italy, France, and Spain,  
ARTH 345 - Northern Baroque Art,  
ARTH 360 - 19th-Century European Art  
ARTH 362 - 20th-Century European Art  
ARTH 372 - 18th -19th-Century US Art  
ARTH 373 - 20th-Century US Art  
ARTH 376 - 20th-C Latin American Art  
AVT 103 - Intro to the Artist's Studio  
AVT 104 - Studio Fundamentals I  
AVT 215 - Typography  
AVT 222 - Drawing I  
AVT 232 - Painting I  
AVT 243 - Printmaking I  
AVT 252 - Fundamentals of Photography  
AVT 253 - Intro to Digital Photography  
AVT 262 - Sculpture I  
AVT 272 - Interdisciplinary Arts  
DANC 101 - Dance Appreciation  
DANC 119 - Dance in Afro-Latino Culture:  
DANC 125 - Beginning Modern Dance  
DANC 131 - Beginning Jazz Technique  
DANC 145 - Beginning Ballet  
DANC 161 - Beginning Tap Dance  
DANC 225 - Beginning Interm Modern Dance  
DANC 231 - Interm Jazz Technique  
DANC 245 - Beginning Interm Ballet  
DANC 301 - What is Dance?  
DANC 390 - Dance History: Pre-20<sup>th</sup> C  
DANC 391 - Dance History: 20<sup>th</sup> Century  
ENGL 370- Introduction to Documentary  
ENGL 372 - Introduction to Film  
ENGL 396 - Intro to Creative Writing  
FAVS 225 - The History of World Cinema  
GAME 101 - Intro to Game Design  
MUSI 100 - Fundamentals of Music  
MUSI 101 - Intro to Classical Music  
MUSI 102 - Popular Music in America  
MUSI 107 - The Development of Jazz  
MUSI 280- Athletic and Ceremonial Ensemble  
MUSI 301 - Music in Motion Pictures  
MUSI 302 - American Musical Theater  
MUSI 380 - Wind Ensemble (1 cr)  
MUSI 381 - University Chorale (1 cr)  
MUSI 382- Piano Ensemble (1cr)  
MUSI 383 - Symphonic Band (1cr)  
MUSI 384- Symphonic Chorus (1cr)  
MUSI 385- Chamber Singers (1cr)  
MUSI 387- Symphony Orchestra (1cr)  
MUSI 389- Jazz Ensemble (1cr)  
MUSI 485- Chamber Ensembles (1cr)  
PHIL 156 - What Is Art?  
THR 101 - Theatrical Medium  
THR 150 - Drama, Stage, and Society I  
THR 151 - Drama, Stage, and Society II  
THR 210 - Acting I  
UNIV 442- Krasnow Seminar in Cognitive Science

THR 230 - Intro to Technical Theater  
THR 395 - Theater -the Life of the Mind  
THR 411 - Directing on Screen  
THR 412 - Performance on Screen

## Social and behavioral science

AFAM 200 - Intro to African American Studies  
ANTH 114 - Intro to Cultural Anthro  
ANTH 120 - Unearthing the Past:  
ANTH 135 - Becoming Human: Evo, Cogn, Culture  
ANTH 396 - Issues in Anthropology: Social Sciences  
CONF 101 - Conflict and Our World  
CONS 410 - Human Dimensions in Conservation  
CRIM 100 - Intro Criminal Justice  
ECON 100 - Economics for the Citizen  
ECON 103 - Microeconomic  
ECON 104 - Macroeconomic  
ECON 105 - Environ Econ for the Citizen  
ECON 110 - Intro to Economic Science  
ECON 111- Lab Methods in Economics (in sequence w/  
ECON 110)  
EDUC 372 - Human Dev, Learning, and Teaching  
GGS 103 - Human Geography  
GOVT 101 - Democratic Theory/ Practice  
GOVT 103 - Intro to American Gov  
GOVT 367- Money, Markets and Economic Policy  
HEAL 230 - Intro to Health Behavior  
HIST 121 - Form of the American Rep  
HIST 122 - Development of Modern America  
LING 306- General Linguistics  
PSYC 100 - Basic Concepts in Psychology  
PSYC 211 - Developmental Psychology  
PSYC 231 - Social Psychology  
SOCI 101 - Introductory Sociology  
SOCI 355- Social Inequality  
SOM 100 - Business in American Society  
TOUR 311 - Women and Tourism  
WMST 200 - Intro to Women and Gender Studies

## Global Understanding

ANTH 302 - Peoples & Cultures of Latin America  
ANTH 304 - Peoples and Cultures of the Pacific  
ANTH 306 - Peoples and Cultures of Island Asia  
ANTH 307 - Ancient Mesoamerica  
ANTH 308 - Peoples & Cultures of the Middle East  
ANTH 309 - Peoples Cultures of India  
ANTH 311 - Peoples and Cultures of Mainland Southeast Asia  
ANTH 312 - Political Anthropology  
ANTH 313 - Myth, Magic, and Mind  
ANTH 316- Peoples and Cultures of the Caribbean  
ANTH 331 - Refugees  
ANTH 332 - Cross-cultural perspectives on globalization  
ANTH 385 - Gender, Class, and Ethnicity in Latin America  
ARTH 319 - Art & Archaeology of the Ancient Near East  
ARTH 320 - Art of the Islamic World  
ARTH 380 - African Art  
ARTH 382 - Arts of India  
ARTH 383 - Arts of Southeast Asia  
ARTH 384 - Arts of China  
ARTH 385 - Arts of Japan  
ARTH 386 - The Silk Road  
CEIE 100 - Environ Engineering  
COMM 305 - Foundation of Intercultural Comm  
COMM 456 - Comparative Mass Media  
CRIM 405 - Law and Justice  
DANC 118 - World Dance  
DANC 318 - Global Perspective: World Dance  
DANC 418- Global Dance Intensive: Study Abroad to Cuba  
ECON 360 - Econ of Developing Areas  
ECON 361 - Econ Dev of Latin America  
ECON 362 - African Econ Development  
ECON 380 - Economies in Transition  
ECON 390 - International Economics  
ENGL 362 - Global Voices  
ENGL 366 - idea of a World Literature  
GCH 205 - International Health  
GGS 101 - Major World Regions  
GLOA 101 - Intro to Global Affairs  
GOVT 132 - Intro to International Politics  
GOVT 133 - Intro to Comparative Politics  
HIST 130 - History of the Modern Global System  
HIST 251 - Survey of East Asian History  
HIST 252 - Survey of East Asian History  
HIST 261 - Survey of African History  
HIST 262 - Survey of African History  
HIST 271 - Latin American History  
HIST 272 - Latin American History  
HIST 281 - Middle Eastern Civilization  
HIST 282 - Survey of Middle Eastern Civilization  
HIST 328 - Rise of Russia  
HIST 329 - Modern Russia and Soviet Union  
HIST 356 - Modern Japan  
HIST 357- Postwar Japan  
HIST 358 - Post-1949 China  
HIST 360 - History of South Africa  
HIST 364 - Revolution and Radical Politics in Latin America  
HIST 365 - Conquest/Colonization in Latin America  
HIST 387 - Topics in Global History  
HIST 460 - Modern Iran  
HIST 462 - Women in Islamic Society  
JAPA 310 - Japanese Culture  
MSOM 305 - Managing a Global Economy  
MUSI 103 - Musics of the World  
MUSI 431 - Music History in Society  
PHIL 243- Global Environmental Ethics  
PSYC 379 - Applied Cross-Cultural Psych  
RELI 100 - Human Religious Experience  
RELI 211 - Religions of the West  
RELI 212 - Religions of Asia  
RELI 313 - Hinduism  
RELI 315 - Buddhism  
RELI 341 - Global Persp on Spirituality and Healing  
RELI 374 - Islamic Thought  
RUSS 354 - Post-Soviet Life  
SPAN 466- Latin American Civilization and Culture  
SOCI 120 - Globalization and Society  
SOCI 320 - Social Structure and Globalization  
SOCI 332 - Sociology of Urban Communities  
SPAN 322 - Intro to Latin American Culture  
SYST 100 - Engineering Sys in a Complex World  
THR 359 - World Stages  
TOUR 210 - Global Understanding through Travel and Tourism  
WMST 100 - Rep of Women

## Synthesis Requirement

Take a synthesis course after completing at least 60 credits

ANTH 400 - Engaging the World:  
ARTH 394 - The Museum  
AVT 385- EcoArt  
AVT 497 - Senior Project  
AVT 498 - Senior Design Project  
BINF 354 - Foundations in Mathematical Biology  
BIOL 301 - Biology and Society (**Not for BIOL major credit**)  
BIS 490 - Senior Project  
CEIE 490 - Senior Design Project  
COMM 326 - Rhetoric of Social Movements and Political Controversy  
COMM 362 - Argument and Public Policy  
COMM 454 - Free Speech and Ethics  
CONF 490 - Integration  
CONS 490 - Integrated Conservation Strategies  
CRIM 495 - Capstone in Criminology, Law and Society  
CS 306 - Synthesis of Ethics and Law for the Computing Professional  
DANC 490 - Senior Dance Seminar  
ECE 447 - Single-Chip Microcomputers  
ECE 492- Senior Adv Design Project I  
ECE 493- Senior Adv Design Project II  
ECON 309 - Economic Problems and Public Policies  
EDCI 490- Students Teaching in Education  
ENGL 305 - Dimensions of Writing and Literature  
EVPP 335 - People, Plants, and Culture  
EVPP 480- Sustainability in Action  
FAVS 352 - Ethics of Film and Video  
FRLN 385 - Multilingualism, Identity, and Power  
GAME 490- Senior Project  
GCH 465- Community Health Capstone  
GEOL 420 - Earth Science and Policy  
GGS 303 - Conservation of Resources Environment  
GGS 304 - Populations Dimensions of Global Change  
GOVT 490 - Synthesis Seminar  
GOVT 491 - Honors Seminar  
HAP 465 - Integration of Professional Skills and Issues  
HIST 300 - Introduction to Historical Method  
HIST 499 - Senior Seminar in History  
IT 492 - Senior Design Project I  
LAS 499 - Research Seminar in Latin American Studies  
MATH 400 - History of Math  
MUSI 490 - Musical Communication in Context  
NCLC 308 - American Landscapes in Fiction, Film, and History  
NURS 465- Examination of Integration of Professional and Health care Issues  
PHIL 309 - Bioethics  
PHIL 343 - Issues in Environmental Ethics  
PHIL 377 - Darwin: Biology and Beyond  
PHIL 378 - Reason, Science, Faith in the Modern Age  
PHIL 379- Perspectives on Time  
PHYS 346- Quarks to Strings  
PROV 342- The George Mason Debates in Current Affairs  
PSYC 405 - Mystery, Madness, and Murder  
PSYC 406 - Psychology of Communication  
PSYC 427- Community Engagement for Social Change  
RELI 490 - Comparative Study of Religions  
RUSS 353 - Russian Civilization  
SOCI 377 - Art and Society  
SOCI 483 - The Sociology of Higher Education  
SOCW 323 - Human Behavior and the Life Course  
SOM 498- Capstone Course: Advanced Business Models  
SPAN 388 - Introduction to Latina/o Studies  
SYST 495 - Senior Design Project II  
THR 440 - Advanced Studies in Directing/Dramaturgy  
THR 496 - Text in Production  
UNIV 442- Krasnow Seminar in Cognitive Science