

**Mark Bolyard** (2006). *Biological Diversity*.  
 C.S., B.A., *Biological Diversity*; *D.*, *University of*  
*California*

**Jennifer Gruenke** (2009). *Biological*  
*Diversity*. *C.S., Biological Diversity*, *B.*  
*California*; *D.*, *University of*

**James A. Huggins** (1987). *Biological*  
*B.A.*, *University of*; *D.*,  
*University of*; *A.*, *University of*  
*California*; *A.*, *University of*

*D.*, *University of*

**James Mahan** (2010). *Biological*  
*B.A.*, *University of*; *D.*, *University of*

**Tamara Popplewell** (2008). *Biological*  
*B.*, *A.E.*, *University of*

**Michael Schiebout** (2012). *Biological*

### I. Major in General Biology – 42–44 hours

- A. 43. 44  
1. B 112, 210, 211, 215, 315, 318. 24  
2. F 300. B 14  
3. B 425, 426, 437, 498. 4
- B. C 46-47  
1. B 112, 210, 211, 215, 315, 318. 24  
2. F 300. B 14  
3. B 304, 415, 498. 7

### II. Major in Zoology – 43–44 hours

- A. 72. 73  
1. B 112, 200, 210, 211, 301, 312, 316, 336. 32  
2. B 304, 310, 315, 317, 323, 325. 4  
3. B 318, 321, 324, 356, 357, 360. 3. 4  
4. B 425, 426, 437, 498. 4
- B. C 75. 76  
1. B 112, 200, 210, 211, 301, 312, 316, 336. 32  
2. B 310, 315, 317, 323, 325. 4  
3. B 318, 321, 324, 356, 357, 360. 3. 4  
4. B 304, 415, 498. 7

### III. Major in Cell and Molecular Biology—72–76 hours

- A. 72. 73  
1. B 112, 211; 210. 215. 12  
2. B 315, 323, 325, 397. 15  
3. B 307, 309, 310, 316, 317, 320, 321, 324. 12  
4. 300. B E 3. 4  
5. C E 111, 112, 314, 315, 324, 326, 319, 329. 26  
6. B 425, 426, 437, 498. 4  
7.
- B. C 75. 76  
1. B 112, 211; 210, 215. 12  
2. B 315, 323, 325, 397. 15  
3. B 307, 309, 310, 316, 317, 320, 321, 324. 12  
4. 300. B E 3. 4  
5. C E 111, 112, 314, 315, 324, 326, 319, 329. 26  
6. B 304, 415, 498. 7  
7.

### IV. Major in Conservation Biology—66–68 hours

- A. C E 111; 2. A 111. g  
B. B 112, 200, 210, 215; 112. 20  
C. B 303, 304, 305, 318, 335, 355. 20  
D. B 425, 426, 437, 498. 4  
E. B 337, 358, 359, 360. 8  
F. B 301, 312, 315, 316, 321, 324, 336, 356, 357. 14. 16  
G.

### V. Major in Botany

- A. 43. 44  
1. B 112, 211, 215, 337, 358, 359, 360. 28  
2. (A. B), 316 (307).  
g  
G A: B 304, 318, 321, 355  
G B: B 315, 323, 325  
3. B 425, 426, 437, 498. 4
- B. C 46-47  
1. B 112, 211, 215, 337, 358, 359, 360. 28  
2. (A. B), 316 (307).  
g  
G A: B 318, 321, 355  
G B: B 315, 323, 325  
3. B 304, 415, 498. 7

### VI. Teacher Licensure in Biology (Grades 6–12)

- A. G 316 (307).  
B. g (A. B), 316 (307).  
F6. 6. 6. 6. 6. 10  
2C D 61. 6. 6. 7. 6. 6. 10

### Progression

- B g 3.50 G A
- C g B
- A G A. A
- g. / B g C A,
- D C

- A g
- B g : B 415, C
- E, B 437 E;
- B 498, D,
- F, E g
- B 415 437.

### Biologists In Observation of the Master's Earth, BIOME, B E g

### Honors Requirements

- A
- 1. C 12 g, 300- g B g g
- 2. A, g (8 ) A
- B g D,
- 3. D g / B g

**211. Microbiology (4) F, S**

Prerequisites: B 112

Corequisites: C E 111

Course description: This course covers the study of microorganisms, including their structure, function, and interactions with the environment. Topics include bacterial growth, metabolism, and the immune response. 3 credits / 3 hours

**215. Botany (4) F**

Prerequisites: B 112

Corequisites: C E 111

Course description: This course covers the study of plants, including their structure, function, and interactions with the environment. Topics include plant growth, photosynthesis, and the water cycle. 3 credits / 3 hours

**221. Human Anatomy and Physiology (4) F, Su**

Prerequisites: B 112, 221  
Corequisites: B 221  
Course description: This course covers the study of human anatomy and physiology, including the structure and function of the human body. Topics include the skeletal system, muscular system, and the circulatory system. 2 credits / 2 hours

**222. Human Anatomy and Physiology (4) S, Su**

Prerequisites: B 221  
Corequisites: B 221  
Course description: This course covers the study of human anatomy and physiology, including the structure and function of the human body. Topics include the respiratory system, digestive system, and the nervous system. 2 credits / 2 hours

**300. Pathophysiology (3) F, W, S**

Prerequisites: B 221, 222  
Corequisites: B 221  
Course description: This course covers the study of pathophysiology, including the causes and effects of disease. Topics include the immune system, infectious diseases, and chronic diseases. 3 credits / 3 hours

**301. Invertebrate Zoology (4) F-Even Years**

Prerequisites: B 112, 210, 4  
Corequisites: B 221  
Course description: This course covers the study of invertebrate animals, including their structure, function, and interactions with the environment. Topics include the phylum Cnidaria, Mollusca, and Arthropoda. 3 credits / 3 hours

**303. Natural Resources Policy (3) F-Oddnd 1 72 483.9/8/M2tmunodeenID y0 Bi26(H 6i02oward2cior nu210.1 72 324.01**

**318. Ecology (4) S**

Prerequisites: B 112, 8

A. g  
3

**320. Immunology (4) F**

Prerequisites: B 112, 211, 4

B ; C E 314/324...  
L

**358. Plant Physiology (4) S-Even Years**

Prerequisites: B 112, 215, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000

**Environmental Applications for Geographic Information Systems (4)**

Geographic Information Systems (GIS) are used in a variety of environmental applications. GIS can be used to map and analyze spatial data, such as land use, population density, and environmental quality. GIS can also be used to model and predict environmental change, such as climate change and land degradation. GIS is a powerful tool for environmental scientists and managers.

**Restoration Ecology (4)**

Restoration ecology is the study of how to restore degraded ecosystems to their original state. Restoration ecology involves understanding the factors that have caused the degradation of an ecosystem and developing strategies to reverse the damage. Restoration ecology is a multidisciplinary field that involves biology, ecology, and geography.

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**179-279-379-479. External Domestic Study Programs (1-3) As Needed**

External domestic study programs are available for students who are interested in studying abroad. These programs provide students with the opportunity to gain international experience and learn about different cultures and environments.

**180-280-380-480. Study Abroad Programs (1-4)**