Welcome to the Department of Biological Sciences





Youngstown State University

Main Office Location Ward Beecher Hall Room 4037 (330)941-3601

> Page 1 of 14 Updated by Dr. J. Tall on 8/6/2014

Table of Contents

Tips for Success!	3
Suggested Undergraduate Timeline	4
Freshman Year	4
Sophomore Year	4
Junior Year	5
Summer before the Senior Year	5
Senior Year	5
Tips for Working with your Faculty Advisor	6
When should you meet with your faculty advisor?	6
Faculty are organized into three divisions based on their area of expertise	6
Make an appointment	6
Be courteous, responsible, and use your advisor's time well	6
Be prepared and organized for meetings	6
Be sure you understand all rules and requirements	7
Important information about grades	7
HELP, I cannot get in touch with my faculty advisor	7
Prerequisite Courses for Various Graduate & Professional Schools	8
Requirements for the Bachelor of Science (B.S.) Degree in Biological Sciences	9
Department of Biological Sciences – Undergraduate Courses	10
Faculty Research Profiles	11
YSU - Center for Student Progress (CSP)	12
Frequently Asked Questions about the CSP Student Tutorial Services	12
Frequently Asked Questions about the CSP Supplemental Instruction (SI) Services	14

Tips for Success!

Choosing the proper undergraduate major and devoting the needed time to your academic career are part of your responsibilities as an adult. Biology is a rigorous major that can provide you with many future career options. Like many endeavors in life, your journey as biology major requires dedication and hard work. Your undergraduate performance and postgraduate career will be products of the quality time that you invest in your academics. To help you get started, here are some tips for success that can be applied throughout your undergraduate degree program.

- Time management
 - o Note examinations, quizzes, assignments and due dates on your calendar
 - o Keep up with your studies on a daily basis
 - Science courses require at least two hours of study time for every hour of lecture
 - O Start reviewing for examinations at least one week in advance
 - Do not review the text and/or lecture notes just before walking into the examination
 - Studying information right before the exam is more likely to hurt your performance
 - This last bit of studied content will be drifting around in your short term memory and may interfere with recall of information that you studied days, weeks or even months before
 - o Get enough sleep the night before your exam
- Utilize your support network on campus
 - Visit your professor and/or graduate teaching assistant, during office hours, to clarify questions as soon as they arise
 - Do not wait until just before the examination
 - Review your performance on assignments, quizzes and exams with your professor
 - Even if you did not need it in high school, take advantage of free tutoring available on campus through the Center for Student Progress (330-941-3538), information regarding the Center is provided at the end of this packet
- Learn how you learn!
 - Consider taking a learning style test such as the VARK to determine your optimal learning mode (visual, aural, read/write, kinetic or multimodal) http://www.vark-learn.com

Suggested Undergraduate Timeline

Freshman Year

- o Before meeting with an advisor, review course requirements for the undergraduate degree
- Meet with your advisor from the Department of Biological Sciences (DBS) and plan a tentative course timetable for your undergraduate degree program
 - o The DBS does not assign an advisor to you
 - Select an advisor based upon your intended career goals
 - This is one of the most important things to do your first year
 - Please refer to "Tips for Working with your Faculty Advisor" section below
- o If you are planning to enter a graduate or professional degree program after graduation, determine the admission requirements for your intended program
 - O This information can be found by searching the program's web site
 - See the attached chart, "Prerequisite Course for Various Graduate & Professional Schools" section below
 - o Examine the prerequisite course work, required as well as recommended
 - o Determine the type of admissions examination required
 - Dental Admission Test (DAT)
 - Graduate Record Examination (GRE)
 - Medical College Admission Test (MCAT)
 - Optometry Admission Test (OAT)
 - Pharmacy College Admission Test (PCAT)
 - o All graduate and professional programs require letters of recommendation
 - Develop genuine relationships with your professors and the professionals practicing in your area of interest during your undergraduate years
 - Letters of recommendation are crucial to your admissions package and you want someone to write a thoughtful and thorough letter on your behalf
- O Start a curriculum vitae, also known as your CV
 - This is your résumé, a document that summarizes your education, employment history and experiences that are relevant to your qualifications for the particular graduate program for which you are applying
- O Join a student organization to meet students with similar goals
 - o Biology Club
 - o Premedical Chapter of the American Medical School Association (AMSA)

Sophomore Year

- Meet with your advisor in the DBS to discuss class scheduling and career goals
- Gain exposure and experience in your field of interest
 - Consider volunteer work or community service
 - o Contact professionals regarding internships or "shadowing" opportunities
- Participate in authentic research projects
 - o Most YSU faculty conduct research and may offer undergraduate students the chance to join their laboratory for the summer, fall, or spring semesters
 - BIOL 4850 Problems in Biology serves as an independent study course (1 to 3 semester hours) which can be taken for up to three total semester hours of credit toward your degree
 - o Apply to research positions hosted by external agencies or programs

Junior Year

- Meet with your advisor in the DBS to discuss class scheduling and career goals
- Gain exposure and experience in your field of interest
 - o Consider volunteer work or community service
 - o Contact professionals regarding internships or "shadowing" opportunities
- Participate in authentic research projects
 - Most YSU faculty conduct research and may offer undergraduate students the chance to join their laboratory for the summer, fall, or spring semesters
 - BIOL 4850 Problems in Biology serves as an independent study course (1 to 3 semester hours) which can be taken for up to three total semester hours of credit toward your degree
 - o Apply to research positions hosted by external agencies or programs
- Register to take the required admissions examination
 - o Register for an optional test preparation course: Princeton or Kaplan
- Begin the application process during the spring semester
 - o Many programs utilize a single, online application site
 - American Medical College Application Service https://www.aamc.org
 - American Association of Colleges of Osteopathic Medicine http://www.aacom.org
 - Pharmacy College Application Service http://www.pharmcas.org/
 - Physical Therapist Centralized Application Service http://www.ptcas.org/home.aspx
 - Veterinary Medical College Application Service http://www.aavmc.org/
 - o Begin work on your personal statement/essay
 - Remember this statement while preparing your essay, it's not what you do, it's what you learn from what you do that makes the difference
 - This statement means you should focus on what you gained intellectually, morally and emotionally from an experience rather than simply listing all the things you have accomplished
 - Begin requesting letters of recommendation
 - It is suggested that you choose the option to waive your rights to read the letters of recommendation

Summer before the Senior Year

- Finish your personal essay for the primary application and have multiple people edit and comment on the content of this document
- Finish the online application process
- Stay active in volunteering, leadership roles, research projects, "shadowing" experiences

Senior Year

- Meet with your advisor in the DBS to discuss class scheduling, career goals and verify that all graduation requirements will be met
- Continue to take challenging courses and a full course load
- Stay active in volunteering, leadership roles, research projects, "shadowing" experiences
- Meet all deadlines for the primary applications
- Complete the secondary applications you receive
- Prepare for the interview
- Offers of acceptance into a graduate program or professional school begin as early as November and as late as the first day of classes

Tips for Working with your Faculty Advisor

When should you meet with your faculty advisor?

- You need to plan your courses for the upcoming semester
- o You need some direction in considering career interests
- You want to learn about research opportunities
- You are having trouble in a course, a personal issue is affecting your academic performance, or in need of a confidant

Faculty are organized into three divisions based on their area of expertise

- Division of Anatomy & Physiology
 - Dr. Deborah Benyo, 330-941-3606, dfbenyo@ysu.edu
 - Dr. Michael T. Butcher, 330-941-2195, mtbutcher@ysu.edu
 - Dr. Johanna Krontiris-Litowitz, 330-941-3572, jkrontirislitowitz@ysu.edu
 - Dr. Robert Leipheimer, 330-941-3601, releipheimer@ysu.edu
 - Dr. Jill M. Tall, Certificate in Anatomy & Physiology Coordinator, 330-941-1387, jmtall@ysu.edu
 - Dr. Mark D. Womble, Graduate Coordinator, 330-941-4727, mdwomble@ysu.edu
- Division of Evolution & Ecology
 - Dr. Thomas Diggins, 330-941-3605, tpdiggins@ysu.edu
 - Dr. Ian J. Renne, 330-941-1943, ijrenne@ysu.edu
 - Dr. John Usis, 330-941-3604, jdusis@ysu.edu
- Division of Molecular Biology & Microbiology
 - Dr. David K. Asch, 330-941-3187, dkasch@ysu.edu
 - Dr. Jonathan Caguiat, 330-941-2063, jjcaguiat@ysu.edu
 - Dr. Chester R. Cooper, Jr., 330-941-1361, crcooper01@ysu.edu
 - Dr. Diana Fagan, 330-941-1554, dlfagan@ysu.edu
 - Dr. Carl Johnston, 330-941-7151, cgjohnston@ysu.edu
 - Dr. Heather Lorimer, 330-941-7179, helorimer@ysu.edu
 - Dr. Xiangjia "Jack" Min, 330-941-1945, xmin@ysu.edu
 - Dr. Gary Walker, Chairperson, 330-941-7177, grwalker@ysu.edu

Make an appointment

- o By phone, e-mail, or come to scheduled office hours
- Each faculty member is required to maintain at least five office hours each week
 - During these hours, they are available to meet with students outside of the classroom
 - Office hours change each semester, the current listing of Biology Faculty office hours is posted on the bulletin board outside of the Biology Office in Ward Beecher Hall, room 4037

Be courteous, responsible, and use your advisor's time well

- o If you made an appointment, then be on time
- o Please remember to cancel or change the appointment if you have to change your schedule

Be prepared and organized for meetings

- o Before meeting with your advisor, review the course requirements for your degree program, your progress toward graduation and course offerings for the upcoming semester
- o Make sure you can clearly articulate your questions and concerns

Be sure you understand all rules and requirements

- It is the student's responsibility to understand the course requirements for your major, the graduation requirements for the College of Science, Technology, Engineering, and Mathematics and for Youngstown State University
- O Rules and requirements can vary by semester/year of enrollment, so do not assume that your friend knows the rules that apply to you!

Important information about grades

- o All courses required for the major must be completed with a final grade of "C" or better
- o Incomplete grades or "I"
 - An incomplete grade may be given to a student who was doing satisfactory work in a
 course but cannot complete all course requirements by the end of the semester due to
 reasons beyond the control of the student and deemed justifiable by the course
 instructor
 - To remove the Incomplete, the student must complete all course requirements prior to the University's published completion date
 - Failure to complete all course requirements prior to the University's published completion date will result in automatic conversion of the "I" to a final grade of "F"
- o Grade of "D" or "F"
 - If a student receives a final grade of "D" or "F" in a course, they may repeat the course and submit a *Course Repetition* form to have the original grade replaced by the subsequent one
 - The student's grade point average (GPA) will be calculated using only the second grade
 - The original grade will remain on the official, academic transcript
 - When applying to a graduate school or professional degree program, *both grades* will be used to calculate the student's final, undergraduate GPA for admission to the program

HELP, I cannot get in touch with my faculty advisor

o Another place to gain helpful insight and advising assistance is the STEM Advising Center in Moser Hall, room 2325 (330-941-7272), http://stem.ysu.edu/gen/stem/Advising m2035.html

Prerequisite Courses for Various Graduate & Professional Schools

The following chart provides general recommendations for prerequisite courses. For the specific courses required for a particular program, it is strongly recommend to visit the school's web site.

YSU Course	Medical	Dental	Veterinary	Pharmacy	Physical Therapy
BIOL 3702 Microbiology	Recommended	Required	Required	Recommended	Recommended
BIOL 3703 Clinical Immunology	Recommended	Recommended	Recommended		
BIOL 3705 Introduction to Human Gross Anatomy	Recommended and required by some programs	Required	Recommended		Required
BIOL 3711 Cell Biology		Recommended			
BIOL 3730/3730L Human Physiology	Recommended	Required	Recommended	Recommended	Required
BIOL 4822 Principles of Pharmacology	Recommended			Recommended	
BIOL 4890/4890L Molecular Genetics	Recommended				
BIOL 5813 Vertebrate Histology		Recommended			Recommended
CHEM 3785 Biochemistry 1	Recommended	Required	Required	Required	
CHEM 3786 Biochemistry 2				Required	
MATH 1572 Calculus 2	Required by some programs	Required by some programs	Required by some programs	Required by some programs	
ECON 2610 Principles of Microeconomics				Required	
PSYC 1560 General Psychology	Recommended	Recommended		Required	Required
SOC 1500 Sociology	Recommended				
PSYC 3702 Abnormal Psychology					Required
PSYC 3758 Life Span Development					Required
PHIL 3725 Biomedical Ethics	Recommended				

Requirements for the Bachelor of Science (B.S.) Degree in Biological Sciences with a Minor in Chemistry

The B.S. degree requires 124 semester hours (s.h.) of which 48 s.h. must be at the 3700 or above level.

Biology – A minimum of 37 s.h. in Biology is required

Required BIOL 2601/2601L & 2602/2602L – General Biology 1 and 2 with Laboratories

BIOL 3721 – Genetics

BIOL 4861 – Senior Biology Capstone Experience

Core courses - One course from two different groups for a total of two courses is required

Group 1: BIOL 3702 – Microbiology (prerequisite: General Biology 1)

BIOL 3711 – Cell Biology: Fine Structure (prerequisite: General Biology 1)

Group 2: BIOL 3730/3730L – Human Physiology & Laboratory (prerequisite: General Biology 2)
BIOL 3740/3740L – Plant Diversity & Laboratory (prerequisite: General Biology 2)
BIOL 3741/37411 – Animal Diversity & Laboratory (prerequisite: General Biology 2)

Lecture/Laboratory course at the 4800-5800 level – At least one is required

BIOL 4800/4800L – Bioinformatics (prerequisite: Genetics)

BIOL 4801/4801L – Environmental Microbiology (prerequisite: Microbiology)

BIOL 4805/4805L – Ichthyology (prerequisite: Animal Diversity)

BIOL 4811/4811L – Comparative Biomechanics (prerequisites: General Biology 2 and Fundamentals of Physics 1)

BIOL 4819/4819L – Taxonomy of Flowering Plants (prerequisite: Plant Diversity or consent)

BIOL 4890/4890L – Molecular Genetics & Laboratory (prerequisite: Genetics)

BIOL 4830/4830L – Functional Neuroanatomy (prerequisite: Human Physiology)

BIOL 4834/4834L – Advanced Physiology Integrative Mechanisms (prerequisite: Human Physiology)

BIOL 4836/4836L – Cell Biology: Molecular Mechanisms (prerequisite: Cell Biology or consent)

BIOL 4841/4841L – Animal Parasitology (prerequisite: Microbiology)

BIOL 4866/4866L – Dendrology (prerequisite: Plant Diversity or Field Botany)

BIOL 5813/5813L – Vertebrate Histology (prerequisite: Cell Biology or Human Physiology)

BIOL 5824/5824L – Behavioral Neuroscience (prerequisite: Human Physiology)

Chemistry – A minimum of 18 s.h. in Chemistry is required

Required CHEM 1515/1515L and 1516/1516L – General Chemistry 1 and 2 with Laboratories (prerequisite: high school chemistry or CHEM 1501 and MATH 1513 or equivalent)

Recommended CHEM1515R and 1516R – General Chemistry 1 and 2 Recitations

Required CHEM 3719/3719L and 3720/3720L – Organic Chemistry 1 and 2 with Laboratories

CHEM 3719R and 3720R – Organic Chemistry 1 and 2 Recitations

Physics

Required PHYS 1501/1501L and 1502/1502L – Fundamentals of Physics 1 and 2 with Laboratories

or PHYS 2610/2610L and 2611/2611L – General Physics with Laboratories

Mathematics

Required MATH 1570 – Applied Calculus 1 or MATH 1571 – Calculus 1

Required STAT 3717 – Statistical Methods

Additional Degree Requirements

English ENGL 1550 and 1551 – Writing 1 and 2 or ENGL 1550H and 1551H Speech COMST 1545 – Communication Foundations or COMST 1545H

General Education Requirements (GERs)

Arts and Humanities (AH) – Two courses

Social Science (SS) – Two courses

Social and Personal Awareness (SPA) – Two courses

Some GER courses are listed in multiple domains and students can use the course in either domain; however, the course cannot be used to fulfill both domains. A listing of all AH, SS, and SPA courses for the 2012 General Education model may be found online.

Department of Biological Sciences – Undergraduate Courses

	mester pur(s) 4 4 4 3 1 4 3 3 1 4 3 3 3 4 1 4 3 3	*Fall Semester X X X X X X X X X X X X X X X X X X X	*Spring Semester X X X X X X X X X X X X X X X X X X X	*Summer Semester X X X X
2601/2061L General Biology: Molecules and Cells 2602/2062L General Biology: Organisms and Ecology 3702/3702L Microbiology 3703 Clinical Immunology 3703L Clinical Immunology Laboratory 3705/3705L Introduction to Human Gross Anatomy 3711 Cell Biology: Fine Structure 3721 Genetics 3725 Mammology 3730L Human Physiology 3730L Human Physiology Laboratory 3740/3740L Plant Diversity 3741/3741L Animal Diversity 3745 Plant Physiology 3759 Evolution 3762/3762L Field Botany 3780/3780L General Ecology 4800/4800L Bioinformatics 4801/4801L Environmental Microbiology 4822 Principles of Pharmacology 4823 Cancer Biology 4829 Microbial Physiology 4830/4830L Functional Neuroanatomy	4 4 4 3 1 4 3 3 3 3 4 1 4 4 4 3 3 3 3 3	X X X X X X X	X X X X X X X X	X X X
2602/2062L General Biology: Organisms and Ecology 3702/3702L Microbiology 3703 Clinical Immunology 3703L Clinical Immunology Laboratory 3705/3705L Introduction to Human Gross Anatomy 3711 Cell Biology: Fine Structure 3721 Genetics 3725 Mammology 3730L Human Physiology 3730L Human Physiology Laboratory 3740/3740L Plant Diversity 3741/3741L Animal Diversity 3745 Plant Physiology 3759 Evolution 3762/3762L Field Botany 3780/3780L General Ecology 4800/4800L Bioinformatics 4801/4801L Environmental Microbiology 4822 Principles of Pharmacology 4823 Cancer Biology 4829 Microbial Physiology 4830/4830L Functional Neuroanatomy	4 4 3 1 4 3 3 3 3 4 1 4 4 4 3 3 3 3 4 4 4 3 4 4 3 3	X X X X X X X	X X X X X X X	X X
3702/3702L Microbiology 3703 Clinical Immunology 3703L Clinical Immunology Laboratory 3705/3705L Introduction to Human Gross Anatomy 3711 Cell Biology: Fine Structure 3721 Genetics 3725 Mammology 3730 Human Physiology 3730L Human Physiology Laboratory 3740/3740L Plant Diversity 3741/3741L Animal Diversity 3745 Plant Physiology 3759 Evolution 3762/3762L Field Botany 3780/3780L General Ecology 4800/4800L Bioinformatics 4801/4801L Environmental Microbiology 4822 Principles of Pharmacology 4823 Cancer Biology 4829 Microbial Physiology 4830/4830L Functional Neuroanatomy	4 3 1 4 3 3 3 3 4 1 4 4 4 4 4 3 3	X X X X X X	X X X X X X	X
3703 Clinical Immunology 3703L Clinical Immunology Laboratory 3705/3705L Introduction to Human Gross Anatomy 3711 Cell Biology: Fine Structure 3721 Genetics 3725 Mammology 3730 Human Physiology 3730L Human Physiology Laboratory 3740/3740L Plant Diversity 3741/3741L Animal Diversity 3745 Plant Physiology 3759 Evolution 3762/3762L Field Botany 3780/3780L General Ecology 4800/4800L Bioinformatics 4801/4801L Environmental Microbiology 4822 Principles of Pharmacology 4823 Cancer Biology 4829 Microbial Physiology 4830/4830L Functional Neuroanatomy	3 1 4 3 3 3 4 1 4 4 4 3	X X X X X X	X X X X X	X
3703L Clinical Immunology Laboratory 3705/3705L Introduction to Human Gross Anatomy 3711 Cell Biology: Fine Structure 3721 Genetics 3725 Mammology 3730 Human Physiology 3730L Human Physiology Laboratory 3740/3740L Plant Diversity 3741/3741L Animal Diversity 3745 Plant Physiology 3759 Evolution 3762/3762L Field Botany 3780/3780L General Ecology 4800/4800L Bioinformatics 4801/4801L Environmental Microbiology 4822 Principles of Pharmacology 4823 Cancer Biology 4829 Microbial Physiology 4830/4830L Functional Neuroanatomy	1 4 3 3 3 4 1 4 4 4 3	X X X X X	X X X X	
3705/3705L Introduction to Human Gross Anatomy 3711 Cell Biology: Fine Structure 3721 Genetics 3725 Mammology 3730 Human Physiology Laboratory 3740/3740L Plant Diversity 3741/3741L Animal Diversity 3745 Plant Physiology 3759 Evolution 3762/3762L Field Botany 3780/3780L General Ecology 4800/4800L Bioinformatics 4801/4801L Environmental Microbiology 4822 Principles of Pharmacology 4823 Cancer Biology 4829 Microbial Physiology 4830/4830L Functional Neuroanatomy	4 3 3 3 4 1 4 4 4 3	X X X X	X X X	
3711 Cell Biology: Fine Structure 3721 Genetics 3725 Mammology 3730 Human Physiology 3730L Human Physiology Laboratory 3740/3740L Plant Diversity 3741/3741L Animal Diversity 3745 Plant Physiology 3759 Evolution 3762/3762L Field Botany 3780/3780L General Ecology 4800/4800L Bioinformatics 4801/4801L Environmental Microbiology 4805/4805L Ichthyology 4822 Principles of Pharmacology 4823 Cancer Biology 4829 Microbial Physiology 4830/4830L Functional Neuroanatomy	3 3 4 1 4 4 3	X X X X	X X	
3721Genetics3725Mammology3730Human Physiology Laboratory3730LHuman Physiology Laboratory3740/3740LPlant Diversity3741/3741LAnimal Diversity3745Plant Physiology3759Evolution3762/3762LField Botany3780/3780LGeneral Ecology4800/4800LBioinformatics4801/4801LEnvironmental Microbiology4822Principles of Pharmacology4823Cancer Biology4829Microbial Physiology4830/4830LFunctional Neuroanatomy	3 3 4 1 4 4 4 3	X X X	X	
3725 Mammology 3730 Human Physiology 3730L Human Physiology Laboratory 3740/3740L Plant Diversity 3741/3741L Animal Diversity 3745 Plant Physiology 3759 Evolution 3762/3762L Field Botany 3780/3780L General Ecology 4800/4800L Bioinformatics 4801/4801L Environmental Microbiology 4805/4805L Ichthyology 4822 Principles of Pharmacology 4823 Cancer Biology 4829 Microbial Physiology 4830/4830L Functional Neuroanatomy	3 4 1 4 4 3	X X X	X	X
3730 Human Physiology 3730L Human Physiology Laboratory 3740/3740L Plant Diversity 3741/3741L Animal Diversity 3745 Plant Physiology 3759 Evolution 3762/3762L Field Botany 3780/3780L General Ecology 4800/4800L Bioinformatics 4801/4801L Environmental Microbiology 4805/4805L Ichthyology 4822 Principles of Pharmacology 4823 Cancer Biology 4829 Microbial Physiology 4830/4830L Functional Neuroanatomy	4 1 4 4 3	X X	X	
3730L Human Physiology Laboratory 3740/3740L Plant Diversity 3741/3741L Animal Diversity 3745 Plant Physiology 3759 Evolution 3762/3762L Field Botany 3780/3780L General Ecology 4800/4800L Bioinformatics 4801/4801L Environmental Microbiology 4822 Principles of Pharmacology 4823 Cancer Biology 4829 Microbial Physiology 4830/4830L Functional Neuroanatomy	1 4 4 3	X	X	
3730L Human Physiology Laboratory 3740/3740L Plant Diversity 3741/3741L Animal Diversity 3745 Plant Physiology 3759 Evolution 3762/3762L Field Botany 3780/3780L General Ecology 4800/4800L Bioinformatics 4801/4801L Environmental Microbiology 4822 Principles of Pharmacology 4823 Cancer Biology 4829 Microbial Physiology 4830/4830L Functional Neuroanatomy	4 4 3			
3741/3741L Animal Diversity 3745 Plant Physiology 3759 Evolution 3762/3762L Field Botany 3780/3780L General Ecology 4800/4800L Bioinformatics 4801/4801L Environmental Microbiology 4805/4805L Ichthyology 4822 Principles of Pharmacology 4823 Cancer Biology 4829 Microbial Physiology 4830/4830L Functional Neuroanatomy	3	X	X	
3741/3741L Animal Diversity 3745 Plant Physiology 3759 Evolution 3762/3762L Field Botany 3780/3780L General Ecology 4800/4800L Bioinformatics 4801/4801L Environmental Microbiology 4805/4805L Ichthyology 4822 Principles of Pharmacology 4823 Cancer Biology 4829 Microbial Physiology 4830/4830L Functional Neuroanatomy	3			
3745 Plant Physiology 3759 Evolution 3762/3762L Field Botany 3780/3780L General Ecology 4800/4800L Bioinformatics 4801/4801L Environmental Microbiology 4805/4805L Ichthyology 4822 Principles of Pharmacology 4823 Cancer Biology 4829 Microbial Physiology 4830/4830L Functional Neuroanatomy			X	
3759 Evolution 3762/3762L Field Botany 3780/3780L General Ecology 4800/4800L Bioinformatics 4801/4801L Environmental Microbiology 4805/4805L Ichthyology 4822 Principles of Pharmacology 4823 Cancer Biology 4829 Microbial Physiology 4830/4830L Functional Neuroanatomy		X		
3762/3762L Field Botany 3780/3780L General Ecology 4800/4800L Bioinformatics 4801/4801L Environmental Microbiology 4805/4805L Ichthyology 4822 Principles of Pharmacology 4823 Cancer Biology 4829 Microbial Physiology 4830/4830L Functional Neuroanatomy	3	X		
3780/3780L General Ecology 4800/4800L Bioinformatics 4801/4801L Environmental Microbiology 4805/4805L Ichthyology 4822 Principles of Pharmacology 4823 Cancer Biology 4829 Microbial Physiology 4830/4830L Functional Neuroanatomy	4	X		
4800/4800L Bioinformatics 4801/4801L Environmental Microbiology 4805/4805L Ichthyology 4822 Principles of Pharmacology 4823 Cancer Biology 4829 Microbial Physiology 4830/4830L Functional Neuroanatomy	5	X		
4801/4801L Environmental Microbiology 4805/4805L Ichthyology 4822 Principles of Pharmacology 4823 Cancer Biology 4829 Microbial Physiology 4830/4830L Functional Neuroanatomy	4		X	
4805/4805LIchthyology4822Principles of Pharmacology4823Cancer Biology4829Microbial Physiology4830/4830LFunctional Neuroanatomy	4	X	X	
4822Principles of Pharmacology4823Cancer Biology4829Microbial Physiology4830/4830LFunctional Neuroanatomy	3	X	21	
4823 Cancer Biology 4829 Microbial Physiology 4830/4830L Functional Neuroanatomy	3	71	X	
4829 Microbial Physiology 4830/4830L Functional Neuroanatomy	2		X	
4830/4830L Functional Neuroanatomy	3		X	
	4		X	
	4	X	Λ	
4836/4836L Cell Biology: Molecular Mechanisms	3	X		_
	1	X		_
	1	Λ	X	
		- V	A	
4841/4841L Animal Parasitology	3	X	37	
4848 Biology of Fungi	3		X	
4849 Medical Mycology	3	**	**	X
4861 Senior Biology Capstone Experience	2	X	X X	
4878 Conservation Biology	3			
4890 Molecular Genetics	2		Even Years	
	3		X	X
4890L Molecular Genetics Laboratory	1	37	X	X
4898 Research in Physiology	3	X	X	
5804 Aquatic Biology	3		X	
5806 Field Ecology	4		X	
5811/5811L Ornithology	4		X Odd Years	
5813/5813L Vertebrate Histology	3		X	
5824/5824L Behavioral Neuroscience	4	X		
5827 Gene Manipulation	2	X		
5832 Principles of Neurobiology	4	X		
5833 Mammalian Endocrinology	3			
5840 Advanced Microbiology	3	X		
5844 Physiology of Reproduction		X		
5853 Biometry	3	Λ		

^{*}The information listed in this table represents the standard schedule; however, course offerings are subject to change.

Please refer to the YSU registration site for the full listing of courses offered each semester.

Faculty Research Profiles

- David K. Asch, Ph.D., University of Kansas Medical Center, 1991. Dr. Asch uses molecular genetic techniques to study the functioning of normal and altered genes in a fungus model system. dkasch@ysu.edu
- *Michael T. Butcher*, Ph.D., University of Calgary, 2006. Dr. Butcher studies the biomechanics of the musculoskeletal system in animal locomotion. He uses muscle fiber typing, electromyography, sonomicrometry, strain gauges, and high-speed videography to analyze the structure and function of muscle, bone, and tendon during locomotion. mtbutcher@ysu.edu
- *Jonathan J. Caguiat*, Ph.D., Michigan State University, 1995. Dr. Caguiat uses genetic and molecular biology techniques to characterize selenite resistant bacteria. jicaguiat@ysu.edu
- *Chester R. Cooper*, Ph.D., University of Texas, Austin, 1989. Dr. Cooper utilizes molecular biology techniques to examine the morphogenesis and virulence of pathogenic fungi with the goal of identifying novel anti-fungal targets. crcooper01@ysu.edu
- **Thomas P. Diggins**, Ph.D., State University of New York at Buffalo, 1997. Dr. Diggins studies various aspects of aquatic and riparian (river corridor) ecology, including spatially and environmentally driven community assembly, successional processes, and the influence of invasive species. tpdiggins@ysu.edu
- *Diana L. Fagan*, Ph.D., University of Texas Southwestern Medical Center, Dallas, 1985. Dr. Fagan uses monoclonal antibodies and genetically engineered proteins to develop treatments for *Staphylococcus aureus* infections, including the use of carbohydrate mimetics as alternatives to antibiotic treatment and investigates the use of mesenchymal stromal cells in the treatment of hernias. dlfagan@ysu.edu
- *Carl G. Johnston*, Ph.D., University of Cincinnati, 1992. Dr. Johnston is an environmental microbiologist. He studies microbial communities and their interactions with the environment in natural and contaminated systems. He is also interested in tropical field ecology. cgjohnston@ysu.edu
- *Johanna K. Krontiris-Litowitz*, Ph.D., Cleveland State University, 1984. Dr. Krontiris-Litowitz is studying the nervous system's role in long-term changes in cardiovascular functions such as high blood pressure or irregular heartbeats. ikrontirislitowitz@ysu.edu
- **Robert E. Leipheimer**, Ph.D., The Ohio State University, 1981. Dr. Leipheimer's research investigates the regulation of smooth muscle contraction and hormone-neurotransmitter interactions, with a special focus on reproductive neuroendocrinology. releipheimer@ysu.edu
- *Heather E. Lorimer*, Ph.D., Columbia University, 1992. Dr. Lorimer studies the mechanisms by which DNA makes copies of itself using mitochondrial DNA in yeast as a model system. helorimer@ysu.edu
- *Xiangjia Min*, Ph.D., University of Hawaii, 1995. Dr. Min is a bioinformatician with interests in DNA and protein sequence analysis and development of bioinformatics software tools and databases for genomic studies. xmin@ysu.edu
- *Ian J. Renne*, Ph.D., Clemson University, 2001. Dr. Renne studies plant community ecology and the factors that drive diversity and community invasibility patterns. He also has interests in plant population biology, avian ecology and evolutionary dynamics of plant community development. ijrenne@ysu.edu
- *Jill M. Tall*, Ph.D., Kent State University, 2001. Dr. Tall is a neurobiologist and pharmacologist who examines the effects of environmental factors on behaviors. jmtall@ysu.edu
- **John D. Usis,** Ph.D., Kent State University, 1990. Dr. Usis studies the impact of humans on natural biological communities, especially wetlands. He is interested in macroinvertebrate community structure (terrestrial and aquatic) and their use as environmental quality indicators. jdusis@ysu.edu
- *Gary R. Walker*, Ph.D., Wayne State University, 1984. Dr. Walker is a molecular cell biologist who uses proteomics and protein analysis to study myogenesis. He is also involved with bio-fuels research. grwalker@ysu.edu
- *Mark D. Womble*, Ph.D., University of Michigan, 1983. Dr. Womble uses electrophysiological methods to study the cellular and molecular mechanisms by which neurotransmitters and drugs regulate neuronal activity. mdwomble@ysu.edu

YSU - Center for Student Progress (CSP)

Frequently Asked Questions about the CSP Student Tutorial Services

When should I seek assistance from a tutor?

As early as possible in the semester! Appointments are scheduled on a first-come, first-serve basis, so **DON'T WAIT!** The following are other good reasons to seek a tutor:

- If you want to maintain good grades
- If you want help with study skills or preparing for tests
- If you are having difficulty with homework assignments or understanding lectures
- If you are performing poorly on tests
- If you are falling behind in class

How do I make an appointment with a tutor?

Appointments are scheduled online through TutorTrac. You are encouraged to come to the CSP for assistance in making an appointment; however, for convenience, you can access this website from any campus computer that has Internet capability. The web address is http://150.134.190.167/TutorTrac/. Follow the steps for creating an account if it's the first time you have used the system.

What if a tutor is not available at the times I am available?

You can complete a "Request for Tutoring" application, available in the Tutorial Center in the CSP. Every effort will be made to accommodate your request, whether by adjusting current tutors' schedules or by hiring new tutors. Beginning fall 2012, online tutoring is also available in select subjects. For details, inquire with CSP Student Tutorial Services staff.

How frequently will I meet with my tutor?

You will meet with the same tutor at the same time and day every week for the remainder of the semester.

How long are the appointments?

Appointments are generally 50 minutes in length. This allows you and/or your tutor to have a few minutes to get to class after the session is over. If you need additional time, you can make arrangements through TutorTrac to schedule more time with the same tutor if they are available, or with a different tutor.

What if I have to cancel my appointment?

You must call the secretary in the CSP as soon as possible at 330-941-7253.

What's the policy regarding missed appointments?

Because there is such high demand for our services, our policy is that if you miss two consecutive appointments, you will forfeit the appointment time with the tutor and be removed from the tutor's schedule. This allows the tutor to accommodate another student. Also, you will be removed from the tutor's schedule if you miss your first appointment.

What if I only need the tutor one time?

We encourage you to continue to see your tutor every week. However, if you feel that the tutor has helped you to clarify the concepts with which you are struggling, thank the tutor and let them know that you will no longer be attending. This is important because the tutor can then serve another student.

Is there a limit to the number of appointments I can schedule?

Yes. Our policy is that you can schedule three appointments per week. Further, you can schedule a maximum of two appointments per week in the same subject.

Are group tutoring sessions offered?

Yes. Tutors are trained to facilitate the learning of individual students as well as small groups of students. If multiple requests are received for tutoring in the same class with the same professor, a small group will be established and tutoring for that class will be offered at the same day and time every week.

What should I bring to the tutoring session?

- Your syllabus, notebook, textbook, past tests and in-class assignments
- Questions
- A good attitude
- A willingness to actively participate in the tutoring session

What should I do when I arrive for my appointment?

Arrive on time (or a few minutes early so that you can mentally prepare yourself for tutoring) and **LOG**IN to TutorTrac at one of the computer terminals.

What can I expect from my tutor?

- Confidentiality, respect and patience
- Concerted effort to aid in your understanding of difficult material
- Help with study skills
- Knowledge about the subject area being tutored
- Ability to help identify learning obstacles and ways to overcome them
- Ability to model effective student behaviors
- Ability to make referrals to other places on campus that may provide you with assistance

Are there things my tutor will NOT do?

Yes. Tutors will **NOT** do the following:

Your homework.

You will need to have attempted your homework assignment before coming to tutoring. Make a note of the concepts with which you are struggling. Then, you and your tutor can review these concepts and work through similar problems.

Rescue you.

Nothing takes the place of consistent hard work throughout the semester. If you fail to do this, showing up for tutoring a week before final exams will not help. Tutors cannot help you recover from a semester of poor time management. You should come to tutoring early in the semester and often thereafter.

Take responsibility for your learning.

The tutor is not here to do the work FOR you. The tutor is here to help you study your subject successfully. You will have to attend class regularly, participate in class, do your homework assignments, read your textbook, and develop a relationship with your instructor.

Have all the answers to every question.

CSP tutors are well trained and knowledgeable about the subject they tutor, but they cannot be expected to know everything. However, you CAN expect your tutor to model the steps a successful student would use to find the solutions.

For any questions regarding the CSP Student Tutorial Services please contact: Robin Sakonyi White, Assistant Director, Student Tutorial Services, Center for Student Progress, Kilcawley Center West, rlsakonyi@ysu.edu or call 330-941-2956.

Hours of Operation: Mondays 8:00 A.M. – 7:00 P.M. and Tuesdays – Fridays 8:00 A.M. – 5:00 P.M.

Frequently Asked Questions about the CSP Supplemental Instruction (SI) Services

What is SI?

Supplemental Instruction (SI) offers a series of weekly review sessions associated with a historically difficult course. SI is provided for *all students* who want to improve their understanding of the course material and improve their grades.

Attendance at sessions is voluntary and free. For you the student, it's a chance to get together with people in your class to compare notes, to discuss important concepts, develop strategies for studying the subject, and to test yourselves before your professor does, so that when he/she does, you'll be ready. At each session you will be guided through this material by your SI leader, a student who has previously taken the course and has demonstrated competency in this area.

What's a SI Leader?

Have you ever wished you could do something over, knowing what you do now? SI leaders are students themselves and are prepared to share with you what they have learned over the years about how to study. They know the course content and are anxious to help guide you through it. They'll be in class with you every day, hearing what you hear and reading what you read. What they don't do is lecture; their job is to help you think about the lectures you hear and the books you read, and then put it all together during the SI review sessions. SI can help you learn the course material more efficiently.

When do SI review sessions start?

On the first day of class you will fill out a short survey to let the SI leader know your class schedule. Your SI leader will set up three sessions each week at times that are best for a majority of the students taking this class. You can attend one, two, or all three every week (the choice is yours) and each one will be different because there is new material to discuss. SI review sessions are informal. Bring your notes; bring your textbook; bring your questions. You will receive a bookmark and email with the days and times of the sessions.

What's in it for me?

If you attend SI sessions regularly, chances are you'll earn a higher grade than if you studied alone. You'll have developed a better understanding of course content as well as more effective ways of studying. Odds are that attending SI for this class will help you in other classes too.

Here's what SI participants say:

"I love the worksheets, games and practice tests!", "People really work together in SI", "I would have never gotten through this course if I hadn't gone to SI.", "Some of my closest friends I met in SI.", "I should have started coming to the sessions earlier!", "_____, my SI Leader was great!", "SI helps me keep up and think about how things work", "I didn't know I would sing for A&P," "Helped to explain things at the board" ... So, come join the fun and review in SI!

For any questions regarding the CSP SI program, please contact: Sue Mark-Sracic, Assistant Director, Supplemental Instruction Services, Center for Student Progress, Kilcawley Center West, symarksracic@ysu.edu or call 330-941-2375.