

Introduction

The purpose of this handbook is to provide undergraduate Biology majors with a resource that can help guide them through their degree program. This handbook combines information from the MTSU undergraduate catalog, from departmental brochures, and from the faculty in an attempt to circumvent the typical problems that arise when students do not meet with their advisor on a regular basis. This handbook is not intended as a replacement for the academic advisor and does not contain all the information that is necessary for successful academic planning. We encourage all students to meet regularly with their advisor.

Things to Do List

- Freshman:** _____ • Investigate majors of interest
_____ • Establish contact with faculty advisor
_____ • Complete First-Year General Studies
_____ • Declare major and concentration area (can be declared or changed anytime, the sooner the better)
- Sophomore:** _____ • Complete remaining courses in freshman and sophomore years
- Junior:** _____ • Register with the Career Development Center in KUC 328
_____ • Review GPA in major, minor, and cumulative
_____ • File Upper-Division Form and Intent to Graduate Form (three semesters before graduation including summers). Forms are available on the Web and in the Biology office
- Senior:** _____ • Begin job search process (Career Development Center in KUC 328 and additional sources) or apply to professional programs or graduate school (fall of senior year)
_____ • Complete appropriate exams *i.e.*, ACT Comp, Major Field Test (MFT), General Education Test
_____ • Departmental Exit Interview

Important Dates

Important dates for each semester are listed on the MTSU Bursar's website <http://www.mtsu.edu/bursar/>. The following are typical time periods you should be aware of each semester (check Pipeline for exact dates; dates differ in the summer):

Time Period to Add a Class	3-4 days after first day of class
Time Period to Drop a Class without a grade	2 weeks after first day of class
Time Period to Drop a Class with a "W"	60% of term, check Pipeline for exact date
Receive a 100% Refund	1 day before first day of class
Receive a 75% Refund	2 weeks after first day of class
Receive a 25% Refund	4 weeks after first day of class

REMEMBER to check the online Registration Guide for specific dates!

The Biology Major

In addition to the general education requirements, the Biology major requires a minimum of 42 semester hours which consist of:

1) A 29 hour core curriculum:

- Biol 1110 and Biol 1120 (a two semester General Biology sequence)
- Biol 2230 (Microbiology)
- Biol 3250 (Genetics)
- Biol 3400 (General Ecology)
- Biol 3500 (Evolution)
- Biol 4110 (General Physiology) **OR** Biol 4210 (Cell and Molecular Biology)
OR Biol 4500 (Plant Physiology)
- Biol 4200 Senior Seminar

2) A 10 hour minimum concentration in one of the following areas:

Genetics & Biotechnology Concentration:

- Biol 4550 (Biotechnology)
- Pick one of the following:*
- Biol 4450 (Molecular Genetics)
- Biol 4460 (Human Genetics)
- Pick one of the following:*
- Biol 4270 (Trans. Elect. Microscopy)
- Biol 4290 (Scan. Elec. Microscopy)
- Biol 4300 (Immunology)
- Biol 4450 (Molecular Genetics)
- Biol 4460 (Human Genetics)
- Biol 4510 (Food/Industrial Micro.)
- Biol 4570 (Prin. Toxicology)
- Biol 4720 (Animal Development)
- Biol 4750 (Plant Biotechnology)

Physiology Concentration:

- Biol 3010 (Embryology)
- Biol 3020 (Comp. Anat.)
- Biol 4110 (Gen. Physiology)*
- Biol 4130 (Histology)
- Biol 4170 (Endocrinology)
- Biol 4210 (Cell & Molecular)*
- Biol 4300 (Immunology)
- Biol 4440 (Gen. Virology)
- Biol 4500 (Plant Physiology)*
- Biol 4520 (Plant Anatomy)
- Biol 4560 (Neurobiology)
- Biol 4570 (Prin. Toxicology)
- *only if not used for core requirement*

Microbiology Concentration:

- Biol 3050 (Parasitology)
- Biol 3210 (Environmental Microbiology)
- Biol 4080 (Mycology)
- Biol 4300 (Immunology)
- Biol 4430 (Diagnostic Microbiology)
- Biol 4440 (General Virology)
- Biol 4450 (Molecular Genetics)
- Biol 4510 (Food/Industrial Microbiology)
- Biol 4550 (Biotechnology)
- Biol 4730 (Microbial Phys. & Biochem)

Organismal Biology and Ecology Concentration:

- Biol 3020 (Comp. Anat. of the Vertebrates)
- Biol 3030 (Non-Flowering Plants)
- Biol 3040 (Entomology)
- Biol 3050 (Parasitology)
- Biol 4060 (Dendrology)
- Biol 4080 (Mycology)
- Biol 4120 (Flowering Plants)
- Biol 4140 (Invertebrate Zoology)
- Biol 4180 (Vertebrate Zoology)
- Biol 4220 (Ichthyology)
- Biol 4250 (Limnology)
- Biol 4390 (Ethology)
- Biol 4520 (Plant Anatomy)
- Biol 4580 (Marine Biology)
- Biol 4700 (Plant-Animal interact.)

Organismal Biology and Ecology Track - students may choose to follow one of the track options described below:

Botany Track: Choose from: 3030, 4060, 4080, 4120, 4520, and 4700. Students in this track are recommended to take Biol 4500 (Plant Physiology) as part of their core curriculum.

Zoology Track: Choose from: 3020, 3040, 3050, 4140, 4180, 4220, and 4390. Students in this track are recommended to take Biol 4110 (General Physiology) as part of their core curriculum.

Ecology Track: Choose at least two courses from: 4250, 4580, 4700 and one course from among the others (if only two courses are chosen from the list of three).

General Biology Track (satisfies teacher education requirements): choose one course from each of the following three areas:

1. Biol 3020 or 4180
2. Biol 3030 or 4080 or 4120
3. Biol 3040 or 3050 or 4140

Course substitutions are made within the emphasis areas when appropriate, as determined by the department chair.

3) Electives to bring the total Biology semester hours to 42 or more.

The following are ancillary requirements for Biology Majors:

Math 1910 (Calculus I) **AND** Biol 4350 (Biometry) **OR** Math 1920 (Calculus II) **OR** Math 2050 (Probability and Statistics)

Chem 1110, 1120, (two semester sequence of General Chemistry with labs) **AND** Chem 2030 **OR** 3010 (Organic Chemistry).

The Department of Biology participates in two **interdisciplinary majors**. Complete descriptions of these programs can be found in the MTSU Undergraduate Catalog or online.

1. Environmental Science and Technology in conjunction with Agribusiness and Agriscience, Chemistry, Engineering Technology, and Geosciences. Contact Dr. Frank Bailey with any questions. Office-SBA 126, phone-898-5483, email-fcbailey@mtsu.edu.

2. Forensic Science in conjunction with Chemistry and Criminal Justice. Contact Dr. George Murphy with any questions. Office-DSB 128, phone-898-2847, email-gmurphy@mtsu.edu.

Traditional Course Offerings

Below is a list of Biology courses and the semester(s) when typically offered.

Fall & Spring	Fall Only	Spring Only
<p>Biol 1030 - Topics in Biology Biol 1110 - General Biology (Zoology) Biol 1120 - General Biology (Botany) Biol 2010 - Human A and P I Biol 2020 - Human A and P II Biol 2030 - Anatomy and Physiology Biol 2230 - Microbiology Biol 3000 - Life Sciences for Elem. Teach. Biol 3200 - Internship in Biology Biol 3230 - Intro. To Biol. Lit. Biol 3250 - Genetics Biol 3400 - General Ecology Biol 3500 - Evolution Biol 4110 - General Physiology Biol 4200 - Senior Seminar Biol 4210 - Cell and Molecular Biology Biol 4280 - Biological Research Biol 4300 - Immunology Biol 4350 - Biometry Biol 4430 - Diagnostic Microbiology Biol 4550 - Biotechnology</p>	<p>Biol 2000 - Orientation to the Medical Lab Biol 3010 - Embryology Biol 3020 - Comp. Anat. Of the Verts. Biol 3030 - Non-Flowering Plants Biol 3040 - Entomology Biol 3070 - Seminar on Environmental Problems Biol 4060 - Dendrology Biol 4150 - Radiation Biology Biol 4180 - Vertebrate Zoology Biol 4290 - Scanning Electron Microscopy Biol 4320 - Seminar: Advan. In Biol. Biol 4440 - General Virology Biol 4450 - Molecular Genetics Biol 4510 - Food/Ind. Microbiology Biol 4750 - Plant Biotechnology</p>	<p>Biol 3050 - Parasitology Biol 3220 - Environ. Regs. & Comp. Biol 3350 - Prin. of Radiation Medicine Biol 4120 - Flowering Plants Biol 4130 - Histology Biol 4140 - Invertebrate Zoology Biol 4250 - Limnology Biol 4270 - Transmitting Electron Microscopy Biol 4360 - Energy Dispersive X-Ray Analysis Biol 4460 - Human Genetics Biol 4500 - Plant Physiology Biol 4580 - Marine Biology Biol 4720 - Animal Development Biol 4760 - Bioinformatics</p>
Summer	Even Year - Fall	
<p>Biol 1030 - Topics in Biology Biol 1110 - General Biology (Zoology) Biol 1120 - General Biology (Botany) Biol 2010 - Human A and P I Biol 2020 - Human A and P II Biol 2230 - Microbiology Biol 3000 - Life Sciences for Elem. Teach Biol 3250 - Genetics Biol 3400 - General Ecology Biol 4110 - General Physiology Biol 4332 - Biome Analysis Biol 4550 - Biotechnology</p>	<p>Biol 4220 - Ichthyology Biol 4400 - Medical Botany Biol 4560 - Neurobiology</p> <p style="text-align: center;">Odd Year - Fall</p> <p>Biol 4070 - Economic Botany Biol 4170 - Endocrinology</p> <p style="text-align: center;">Even Year – Spring</p> <p>Biol 3240 - Introduction to Evolution Biol 4520- Plant Anatomy Biol 4590 - Principles of Environ. Toxicology Biol 4730 - Microbial Physiology & Biochem.</p> <p style="text-align: center;">Odd Year – Spring</p> <p>Biol 3160- Honors Soc Iss & Gen Tech Biol 3210 - Environmental Microbiology Biol 4080 - Mycology Biol 4390 - Ethology Biol 4570 - Principles of Toxicology</p>	

Academic Policies

Student Status:

Your classification is determined by the number of credit hours completed:

Freshman:	0-29
Sophomore:	30-59
Junior:	60-89
Senior:	90 or more

Grades:

The following is a description of the criteria used in assigning course grades:

A - Work of distinctly superior quality and quantity accompanied by unusual evidence of achievement

B - Work of good quality and quantity accompanied by evidence of achievement beyond the essentials of the course

C - Work demonstrating fulfillment of the essentials of the course

D - Passing work, but below the standards of graduation quality

F - Failure

Grade Point Average:

Each grade is assigned a numerical equivalent as follows:

A = 4.00,	A- = 3.67	
B+ = 3.33,	B = 3.00,	B- = 2.67
C+ = 2.33,	C = 2.00,	C- = 1.67
D+ = 1.33,	D = 1.00,	D- = 0.67
F = 0.00		

To calculate a GPA, the grade's numerical equivalent is multiplied by the number of credits a course is worth. The product represents quality points earned by completion of the course.

Grade of A x 3 hour = 12 quality points

Grade of B x 3 hour = 9 quality points

Grade of C x 4 hour = 8 quality points

Grade of D x 2 hour = 2 quality points

Grade of F x 3 hour = 0 quality points

The sum of quality points is divided by the sum of credits attempted and yields the GPA.

Example:

<u>Course</u>	<u>Credits Attempted</u>	<u>Grade</u>	<u>Quality Points</u>
ENGL 1010	3	A	12
COMM 2200	3	B	9
BIOL 1030	4	C	8
PHED 2100	2	D	2
MATH 1610	3	F	0
Total	15		31

$$31 \div 15 = 2.066 \text{ GPA}$$

Pass, incomplete, audit, and withdrawal are not counted in the GPA.

Academic Probation and Suspension:

A student who fails to meet one of the following standards will be placed on academic probation:

1. Attain a 2.00 GPA for the current term, or
2. Meet one of the following:
 - 00 - 29.99 hours attempted - 1.50 GPA
 - 30 - 49.99 hours attempted - 1.80 GPA
 - 50 or more hours attempted - 2.00 GPA

A student on probation who fails to meet one of the above standards during the next semester of enrollment will be suspended.

A first suspension requires that the student stay out of school for one semester. Summer terms do not count for this purpose. A second or subsequent suspension results in dismissal from the university for one calendar year.

Course Repetition:

You may repeat any course in which you have received a grade of "C" or lower. The last grade earned will stand, even if that grade is lower than the first attempt. The first attempt is always removed from calculation of the GPA, but it still appears on your transcripts. Each subsequent attempt is calculated into the GPA. *NOTE: You are not required to repeat a "D" except when another course requires a "C" or better as a prerequisite. Note: Many advanced programs (medical schools, graduate schools etc.) will re-calculate your GPA including the grade from the first attempt before considering your application.*

Withdrawals:

University Policies:

- 1) Students who withdraw from a course at any time during the first two weeks of the semester will not receive a grade on their transcripts.

- 2) Students who withdraw from a course after 60% of term has been completed (check Pipeline for exact date) will receive a grade of "W" on their transcript.
- 3) Students cannot withdraw from a course after 60% of the term has been completed (check Pipeline for exact date) without the permission of the instructor and the department chair.
- 4) Students who withdraw from a course after 60% of the term has been completed (check Pipeline for exact date) will receive a grade of "W" if they are passing the course at the time of the withdrawal and an "F" if they are failing the course at the time of the withdrawal.

Departmental Policy:

After 60% of term has been completed (check Pipeline for exact date), students may not withdraw from a course unless there are extreme extenuating circumstances that necessitate withdrawal from the University. Permission from the instructor is required.

Incompletes:

A student may receive an incomplete ("I") if there are extenuating circumstances occurring after 60% of the term has been completed (check Pipeline for exact date) that would prevent the student from completing the course requirements. The instructor determines if the circumstances warrant an incomplete. An incomplete is only granted if the student is in good academic standing at the time that the circumstances occur. Students are required to make up an incomplete before the end of the next regular semester. Incompletes convert to a grade of "F" if they are not completed.

Advising Tips

Below are several tips that have been collected from the faculty and students that might help make your experience in the Biology Department successful.

GENERAL INFORMATION

- ◆ **TAKE RESPONSIBILITY for your own academic career.** The most successful students have consulted various official resources so that they fully understand the requirements, rather than bouncing along uninformed.
- ◆ **CONTACT YOUR ADVISOR at least twice a year.** Discuss with your advisor a strategy for fulfilling graduation requirements, major and minor requirements, options for electives, career plans, and any relevant problems or questions you have.
- ◆ **CULTIVATE A GOOD WORKING RELATIONSHIP with your advisor.** Your advisor can then better function in counseling, suggesting, and answering your specific questions. If you do not feel this is possible, with the advisor you were assigned, go to the departmental office (DSB 128), and request a different advisor.
- ◆ **FOLLOW YOUR ADVISOR'S ADVICE;** it is likely to be more accurate than the advice of your friends and family.
- ◆ **KEEP YOUR ADVISOR INFORMED** if you decide to change your major or minor, and fill out the appropriate forms.
- ◆ **FILL OUT REQUIRED PAPERWORK on time.** Particularly important is filing your upper division form as early as possible (before your junior year begins). An analyst will examine this form carefully,

and send you and your advisor a letter detailing which requirements you have met and which you have not. The sooner any misconceptions are corrected, the more likely you are to be able to graduate when you expect to. Even your advisor may have mistakenly interpreted your progress; the analyst will be able to help you get back on track.

- ◆ **DO NOT TAKE ADVICE FROM SOMEBODY NOT AUTHORIZED TO GIVE IT!** Your friends and other students will probably be happy to advise you, but if they are wrong and you listen to them, you will have to suffer the consequences.

REGISTRATION STRATEGIES

- ◆ **CLEAR HIGH SCHOOL DEFICIENCIES** within the first semester of enrollment. A hold will be placed on your registration every semester after the first one until the deficiency is cleared. The process of clearing the hold for registration could create a delay and prevent you from getting into the classes you want. *NOTE: If you must take prescribed (K courses) reading, writing, or math, those classes must be completed before enrolling in your biology or chemistry classes.*
- ◆ **COURSES ARE NUMBERED according to level of difficulty:** 1000-1999 (freshman); 2000-2999 (sophomore); 3000-3999 (junior); 4000-4999 (senior). It is advised that you take your biology classes in this order.
- ◆ **COURSES WITH LABS require more in-class time.** Most biology courses include a lecture and a separate lab class, as is the case with required chemistry courses. Take at least two lab classes every semester so that you can avoid an otherwise inevitable semester with four lab classes (four concurrent lab classes are almost impossible to schedule; furthermore, you would spend so much time in labs and lectures for those four classes that you would not have much time left to study).
- ◆ **BEGIN YOUR CHEMISTRY courses as soon as possible.** Many upper division (junior & senior) biology classes require some organic chemistry as a prerequisite to the class. You can take this in your sophomore year if you start your freshman chemistry in your first year. For a chemistry minor, the recommended courses are Chem 1110, 1120 (not 1010, 1020), 3010, 3020 (not 2030), and 3530.
- ◆ **BEGIN YOUR MATH courses as soon as possible.** Biology 3250 will be easier if your math requirements have been completed.
- ◆ **BEGIN YOUR ENGLISH COMPOSITION courses as soon as possible.** You will have writing assignments and essay exam questions in many Biology classes.
- ◆ **EXCEED THE MINIMUM required hours in biology** (hours that will count toward the 120 required for a bachelor's degree). More coursework will make you more competitive in the job market or for entrance into graduate programs.
- ◆ **ENROLLMENT IN SUMMER COURSES** can speed your progress toward graduation or make your course load a little lighter during regular semesters.
- ◆ **TO GRADUATE IN FOUR YEARS without attending in summer,** you should average 15 credit hours every semester, and maintain the required GPA. Some courses are not offered every semester, so you must plan in advance which courses to take. Devise a plan for 8 semesters, and go over your plan with your advisor. The plan may change between now and graduation, but by making an initial strategy, you are less likely to have problems meeting all requirements in a timely manner.
- ◆ **REPEATING A COURSE** is not always the best strategy for improving your GPA. Consider taking a different course of an equivalent level – you might like this course better, and it may positively influence the grades you earn. Better yet, be diligent enough to avoid earning grades below a C.

- ◆ **IF YOU ARE EMPLOYED** in addition to being a student, you should take fewer semester hours of credit. It may take longer to graduate, but repeating a course to make up a bad grade takes more money as well as more time. Students working a 40-hour week usually will not do well with more than one class. Because every student is different, it is difficult to generate a guideline on how many hours to spend on work and school. If you are not already in debt, consider using student loans to pay for school, rather than employment. Otherwise, tread very carefully.

OTHER ADVICE

- ◆ **STUDY, STUDY, STUDY!** Strive for an understanding of biological processes. Developing your ability to reason will save you time in the long run. Most students find it easier and quicker to study for understanding than to blindly memorize. Remember, biology is not merely a body of knowledge, it is a scientific process based upon logical thought processes.
- ◆ **GET TO KNOW YOUR PROFESSORS.** They want to see you earn good grades, and most are willing to spend some time outside of class to discuss the material with you. A question like “I don’t understand how to distinguish prophase from telophase” will likely stimulate a more helpful response from your professor than “I don’t understand how I scored so low after studying so much” (if you do not know, your professor surely does not either).
- ◆ **GET TO KNOW YOUR FELLOW STUDENTS.** You will likely find some helpful study-buddies, and even make a few life-long friends while you are at it.
- ◆ **GET INVOLVED with the Biology Department as a community.** Join clubs, honor societies, and volunteer your assistance when the opportunity arises. Students who participate more generally perform better academically, establish better relationships with faculty and staff, and enjoy college more.
- ◆ **REGISTRATION FORMS FOR THE GRE,** GMAT, and other exams are located outside Testing Services KUC 327.
- ◆ **PRE-HEALTH PROFESSION MAJORS–pick up supplemental materials** for your curriculum from the advising office in DSB 241. These materials will provide additional, specific information about which classes you should take, when you should apply to the program, extramural requirements such as volunteer work, etc. Some of this information is also available from the Undergraduate Catalog, in the Chemistry section.
- ◆ **PERFORMANCE IS MORE IMPORTANT THAN TIME.** It is more important to do well in your courses than it is to graduate in four years. Do not take a full load if you are working or have other obligations in your life that limit your study time. Graduate schools and medical schools are more concerned about your GPA and letters of recommendation than whether or not you completed your degree in four years.

TRANSFER STUDENTS

- ◆ **MEET WITH A TRANSFER ADVISOR** prior to or during your first semester. The transfer advisor will help you determine which courses were transferred and help get you assigned to a regular faculty advisor. The transfer advisors are Dr. Jetton, Dr. DuBois and Dr Murphy (Chair).
- ◆ **YOU MUST TAKE A SPECIFIED PERCENTAGE OF COURSES AT MTSU.** Twenty five percent (typically at least 30 hours) of total credit hours must be earned through MTSU. Twelve of the last 18 hours must be completed at MTSU, and 30 of the 42 upper division hours required for graduation must be completed at MTSU.
- ◆ **COURSES TRANSFERRED FROM A JUNIOR COLLEGE** do not count as upper division hours even if they show up on your transcript as a 3000 or 4000 level course after equivalency determination. They will not count towards the 42 upper division hours needed to graduate.

Typical Questions

Q. When do I choose my major?

- A.** Many students choose their majors upon entering MTSU. However, some students are undecided about a specific major until the junior year. MTSU provides a counseling service that will help you identify your strengths and select a major. More information can be obtained from the Academic Support Center, McFarland Building.

Q. Who are the college advisors?

- A.** The college advisors function as resource people for students and faculty. The advisors assist in the evaluation of transfer credit and the filing of upper-division forms. The college advisors also answer academic policy questions, track the completion of high school unit deficiencies, and monitor the completion of general education requirements for Biology majors. The college advisor will work with your faculty advisor to make sure all your needs are addressed. The College of Basic and Applied Sciences advisors are located in Jones Hall. Last names A-L, JH 119 or call 615-494-7874. Last names M-Z, JH 256 or call 615-898-5087.

Q. Who is my faculty advisor?

- A.** Your advisor is a faculty member assigned by your major department to assist you in planning your academic study and professional career. The faculty advisor is a person with experience in the particular field of Biology that most interest you.

Q. How do I find my faculty advisor?

- A.** Contact the Department of Biology. The secretary or department chair will assign you a faculty advisor. Contact information for your advisor and office availability may be found on the Biology Department website
<http://www.mtsu.edu/biology/faculty/index.shtml>.

Q. When should I see my faculty advisor?

- A.** You should contact your faculty advisor at least one time each semester. After you have met your advisor and developed a professional relationship, the frequency of meetings will depend upon your needs.

Q. What is a full-time course load?

- A.** You are considered a full-time undergraduate student if you are registered for 12 or more semester hours. To register for more than 18 semester hours during any semester, you must complete an overload form (available from the departmental office) and get the permission (and signatures) from your faculty advisor and from the dean's office.

Q. How do I withdraw from the University?

- A.** Students finding it necessary to withdraw from the University should initiate the official withdrawal process in the University Withdrawal Office, Cope 202D (www.mtsu.edu/withdraw). Any student who leaves the University without officially withdrawing will receive a grade of “F” in all courses in which he or she is registered. **Simply no longer attending classes does not withdraw you from the course or university. You must officially drop or withdraw. If you are just dropping a class and are still registered for others, use Pipeline/RaiderNet. If you are dropping a class(es) and are not still registered for others, you must officially withdraw.**

NOTE: It would be a good idea to access Pipeline/RaiderNet the next day to verify that you have been dropped or withdrawn from class(es).

Q. What is academic probation and suspension?

- A.** A student failing to meet one of the following standards during any term will be placed on academic probation for the subsequent term:

1. Attain a 2.0 GPA for the current term, or
2. Meet one of the following retention standards:
 - 00-29.99 hours attempted must have 1.5 GPA
 - 30-49.99 hours attempted must have 1.8 GPA
 - 50 or more hours attempted must have 2.0 GPA

A student on academic probation who fails to meet one of the above standards during the next term enrolled will be suspended. Students previously suspended are not eligible for probationary status.

Biology Scholarships

In addition to the awards and scholarships listed below, the department participates in the campus Work Study and Work Scholarship programs. For further information see the Financial Aid website <http://www.mtsu.edu/financialaid/>.

Listed below are the scholarships available through the Biology Department. All interested individuals should contact the Biology Department in Davis Science Building, room 128, or call (615) 898-2847 for application/information.

Outstanding Awards

Clay M. Chandler Outstanding Freshman Biology Award and Scholarship—Awarded annually to an outstanding Freshman Biology major typically enrolled in General Biology 1110/1120. Award announced in April, scholarship given for the succeeding fall semester. *By faculty nomination.* Maximum of \$500 per year awarded.

Ralph E. Sharp Outstanding Sophomore Award and Scholarship—Awarded annually to a Biology major of sophomore standing. Award announced in April, scholarship given for the succeeding fall semester. *By faculty nomination.* Maximum of \$500 per year awarded.

Philip M. Mathis Outstanding Junior Award and Scholarship—Awarded annually to a Biology major of junior standing. Award announced in April, scholarship given for the succeeding fall semester. *By faculty nomination.* Maximum of \$500 per year awarded.

Peter I. Karl Outstanding Senior Award—Awarded to a Biology major of senior standing who will graduate in May or August, or who graduated in December. Award announced in April. *By faculty nomination.* Maximum of \$500 awarded.

Incoming Freshman Scholarships

Mary C. Dunn Freshman Scholarships—Awarded annually to an incoming freshman Biology major. Given to the first and second place scorers on a departmental exam given to high school seniors in April each year. Registration and information through the Biology Dept. Office. Two \$1500 scholarships (\$750 each semester) awarded.

Patrick J. Doyle Freshman Scholarship—Awarded annually to an incoming freshman Biology major. Given to the third place scorer on a departmental exam given to high school seniors in April each year. Registration and information through the Biology Dept. Office. \$1000 scholarship (\$500 each semester) awarded.

Ellis Rucker Freshman Scholarship—Awarded annually to an incoming freshman Biology major. Given to the fourth place scorer on a departmental exam given to high school seniors in April each year. Registration and information through the Biology Dept. Office. \$500 for fall semester awarded.

Undergraduate Scholarships

***Kurt E. Blum Botany Research Scholarship** - Awarded in support of undergraduate or graduate research in botany. *No application deadline.* Maximum of \$500 per year awarded.

George Davis Scholarship - Awarded to a non-traditional Biology major of sophomore standing or above. Award announced in April, scholarship given for the succeeding fall semester. *Application deadline 15 February.* Maximum of \$500 per year awarded.

Kevin Driver Memorial Scholarship - Awarded to a student of junior standing (minimum of 85 hours earned) with an interest in Organismal Biology, Physical Therapy or Sports Medicine. Award announced in April. *Application deadline 15 February.* Maximum of \$500 per year awarded.

***John D. DuBois Scholarship** - Awarded to undergraduate or graduate students to provide travel for paper presentations at scientific meetings. Awards possible throughout the year. *No application deadline.* Maximum of \$500 per year awarded.

Freeman P. Jordan, Jr. Scholarship - Awarded to a Biology major in support of research in Microbiology or Molecular Biology. Awards possible throughout the year. *No application deadline.* Up to \$500 per year awarded.

***Padgett Kelly Research Scholarship** - Awarded to an undergraduate or graduate student to support summer studies or field research in ecology or conservation Biology. Award is for purchase of equipment, supplies or support travel to and from research sites. Awards possible throughout the year. *No application deadline.* Maximum of \$500 per year awarded

James R. Kemp Scholarship - Awarded to a Biology major of junior or senior standing (minimum of 85 hours earned) minoring in secondary education. Award announced in April, scholarship given for the succeeding fall semester. *Application deadline 15 February.* Maximum of \$500 per year awarded.

***Mitchell Magid Scholarship** - A scholarship for students doing research or internships in Organismal Biology. Available to a student of any classification level. Award announced in April. *Application deadline 15 February.* Maximum of \$500 per year awarded

***Charles R. McGhee Scholarship** - Awarded to a Biology major of junior, senior, or graduate standing seeking licensure to teach Biology. Award announced in April, scholarship given for the succeeding fall semester. *Application deadline 15 February.* Maximum of \$500 per year awarded.

***George G. Murphy Research Scholarship** - Awarded to an undergraduate or graduate student to purchase supplies or support travel associated with research projects. Awards possible throughout the year. *No application deadline.* Maximum of \$500 per year awarded.

***J. Gerald Parchment Scholarship** - Awarded to a Biology major of sophomore or above standing for summer study or academic year research. Award announced in April. *Application deadline 15 February.* Maximum of \$500 per year awarded.

***John A. Patton Scholarship** - Awarded to a Biology major of sophomore or above (including graduate) standing for research support or summer study. Award announced in April. *Application deadline 15 February.* Maximum of \$1,500 per year awarded.

Maria de los Reyes Microbiology Scholarship - Awarded to a Biology major of sophomore standing or above who has completed Biology 1110, 1120, 2230 and 3250 by the spring semester, and has declared an emphasis in microbiology. Award announced in April, scholarship given for the succeeding fall semester. *Application deadline 15 February.* Maximum of \$500 per year awarded.

Wayne Rosing Biology Scholarship - Awarded to a Biology major of junior standing with a minor in secondary education or who has Botany as their emphasis area. Award announced in April. *Application deadline 15 February.* Maximum of \$500 per year awarded.

David Sanborn Ecology Scholarship - Awarded to an outstanding junior who has shown an interest in the area of field biology. Must have completed at least one field biology course with evidence of academic excellence. Award announced in April. *No application required.* Maximum of \$500 awarded.

Eugene F. Strobel Scholarship - Awarded to a Biology major of junior standing (60-100 hours earned), who plans a teaching career at the secondary or college level. Award announced in April. *Application deadline 15 February.* Maximum of \$500 per year awarded.

Sarah H. Swain Undergraduate Research Scholarship - To purchase supplies or support travel associated with research projects. Awards possible throughout the year. *No application deadline.* Maximum of \$500 awarded per year.

Stephen M. Wright Research Scholarship - Awarded to an undergraduate or graduate student to support any aspect associated with research in microbiology or biotechnology. Awards possible throughout the year. *No application deadline.* Maximum of \$500 per year awarded.

Graduate Scholarships

Sarah F. Barlow Scholarship - Awarded to graduate teaching assistant who plans to teach at the secondary or college level. Award announced in April. *Application deadline 15 February.* Maximum of \$500 per year awarded.

William H. Butler, Jr. Graduate Research Scholarship - To provide support for expenses associated with thesis research. Awards possible throughout the year. *No application deadline.* Maximum of \$500 per year awarded.

Mary C. Dunn Graduate Scholarship - To support research efforts. Awards announced in April. *Application deadline 15 February.* Two scholarships of up to \$2000 each (up to \$1000 per semester) awarded.

J.L.Fletcher Graduate Scholarship - Awarded to a beginning Biology graduate student. Award announced in April, scholarship given for the succeeding fall semester. *Application deadline 15 February.* Maximum of \$500 per year awarded.

Thomas E. Hemmerly Graduate Research Support Fund - To provide travel and/or supplies necessary for thesis research. Awards possible throughout the year. *No application deadline.* Maximum of \$500 per year awarded.

Charles Holland Biology Club Scholarship - Available to students enrolled in the graduate program. Award announced in April. *Application deadline 15 February.* Maximum of \$500 per year awarded.

Brian Miller Graduate Research Scholarship - To support research of second year graduate students conducting field studies on Herpetology or Biospeleology in TN. Award is for purchase of equipment, supplies or support travel to and from research sites. Awards possible throughout the year. *No application deadline.* Maximum of \$500 per year awarded.

Dennis Mullen Vertebrate Biology/Aquatic Ecology Research Scholarship - Awarded to graduate students engaged in research in Vertebrate Biology or Aquatic Ecology. Award is for purchase of equipment, supplies or support travel to and from research sites. Awards possible throughout the year. *No application deadline.* Maximum of \$500 per year awarded.

Marion R. Wells Graduate Research Scholarship - To provide support for thesis research conducted during summer months. Award announced in April. *Application deadline 15 February.* Maximum of \$500 per year awarded.

John M. Zamora Graduate Research Scholarship - To provide support for expenses associated with thesis research. Awards possible throughout the year. *No application deadline.* Maximum of \$500 per year awarded.

Other Awards

Elliott Dawson/BioVentures Biotechnology Scholarship - Awarded to a Biology major of junior standing or above who has taken, or currently enrolled in Biotechnology. *No application required.* Maximum of \$1000 awarded each fall and spring semester.

Mary Ann Harrison McClary and Richard E. McClary Scholarship - Awarded every third year to an outstanding Biology major who is at least of sophomore standing. *No application required.* Minimum of \$800 per year awarded.

C.W. Wiser Medical/Allied Health Award and Scholarship - Awarded to a graduating student who will continue studies in the medical sciences, at a school of medical technology, or other allied health field. Award announced in April. *No application required.* Maximum of \$500 awarded.

Biology Scholarship Application

Scholarship _____

Applicant _____ M # _____

Date _____ MTSU Box Number _____

Email Address: _____

Current Address _____

Major _____ Emphasis Area _____ Expected Graduation Date _____

Overall Hours Completed _____ Overall GPA _____

Biology Hours Completed _____ Biology GPA _____

Previous College Degrees and Institutions _____

Advisor/Major Professor _____

In a short paragraph, please indicate your career goals _____

Attachments:

- (1) Please attach a copy of your transcript
- (2) If you are applying for a graduate or undergraduate **scholarship***, a letter of support from a Biology faculty member and a curriculum vitae are required
- (3) If you are applying for a graduate or undergraduate **research support scholarship***, a letter of support from a Biology faculty member, a curriculum vitae, and a 400 word (or less) overview of research and budget of how award funds will be used to support research are required

* See scholarship brochure for details

Revised: Jan. '07

Student Organizations/Activities/Services

Organizations:

Biology Club: Faculty Advisor – Dr. John Zamora

The Biology Club is the oldest student organization on the MTSU campus. It is open to ALL students. You do not need to be a Biology major or minor. There are NO dues! Activities are dependent on the members and officers. Outdoor recreation, bowling, miniature golf, pizza parties, and fund raising through recycling have all been a part of the biology club experience.

Tri Beta: Faculty Advisor – Dr. Vince Cobb

Tri-Beta is a national biological honor society founded in 1922 by Dr. Frank Brooks at Oklahoma State University. The MTSU chapter is the Kappa Delta Chapter founded in 1967. Undergraduate Biology majors with a 2.8 overall GPA and 3.0 in Biology are eligible for membership. The society conducts fundraisers, attends the regional convention, and sometimes works in a recreational trip. Meetings occur twice monthly.

Pre-Scripts: Faculty Advisor – Dr. Amy Jetton

Pre-Scripts is a society for pre-health professional students at Middle Tennessee State University. The organization encourages participation of any pre-health professional student, particularly pre-medicine and pre-pharmacy students. The purpose of this organization is to foster interest in careers as a health care professional, and particularly in the practice of medicine. Local physicians, other health care professionals and representatives of medical schools provide educational opportunities as well as valuable information about applying for medical, pharmacy and other health professional schools and programs. The fee for new members is \$15; continuing membership is \$5/semester, payable at the meetings. Meetings occur on the 2nd and 4th Wednesdays of each month. Signs announcing meetings will be posted in DSB and WPS.

Student National Medical Association: Faculty Advisor – Dr. Gore Ervin

The Student National Medical Association (SNMA) is the oldest and largest medical student organization dedicated to advancing healthcare in underserved communities. A SNMA chapter was installed at MTSU during the 2000 fall semester. SNMA membership is open to anyone interested in health care as a career, regardless of race, age, handicap, or religious preference. SNMA membership provides opportunities for pre-healthcare professional students to gain first-hand knowledge about professional school admission requirements through lectures by local and regional health-care providers, and visits to local and regional health-care training programs. Dues include a \$10 initial fee for new members and a charge of \$5 per semester, payable at the meetings. Meetings times are to be announced each semester.

Activities:

Undergraduate Research – The College of Basic and Applied Sciences sponsors an Undergraduate Research program that is available to all students in B.A.S. The program

provides some funds to support students involved in an independent research project under the guidance of a faculty member. Grant applications are distributed within each department early each fall. Funding is determined on a competitive basis.

Services:

Specialty advising:

	<u>Advisor(s)</u>	<u>Email Address</u>
Medical Technology	Dr. Anthony Farone	afarone@mtsu.edu
Pre-Dental	Dr. Anthony Newsome	anewsome@mtsu.edu
Pre-Med	Dr. Amy Jetton	ajetton@mtsu.edu
	Dr. John DuBois	jddubois@mtsu.edu
Teacher Licensure	Dr. Michael Rutledge	mrutledg@mtsu.edu
	Dr. Kim Sadler	ksadler@mtsu.edu

Computer Lab – The Biology department computer lab is located in WPS 305. The hours of operation vary each semester and are posted on the door. About 20 PC computers and a printer are available.

Additional Support Services

Admissions Office, Cope Administration Bldg., Room 209, 615-898-2111

<http://www.mtsu.edu/admissn/>

The MTSU admissions office provides assistance with admissions problems evaluates credit from transfer institutions, answers questions concerning military service credit, in-state residency requirements, and credit awarded via exams or test scores.

Business Office, Room 105, Cope Administration Bldg., 615-898-2761

<http://www.mtsu.edu/bursar/>

This office handles all billing and student finances.

Career Development Center, Keathley University Center, Room 328, 615-898-2500

<http://www.mtsu.edu/career/>

This office helps students and alumni find internships, part-time and full-time employment prior to and after graduation.

Counseling Services, Keathley University Center, Room 329, 615-898-2670

<http://www.mtsu.edu/countest/>

Counseling Services offers personal counseling, to assist students in their emotional, intellectual, and social growth.

Disabled Student Services, Keathley University Center, Room 120, 615-898-2783

<http://www.mtsu.edu/dssemail/index.shtml>

This office acts as advocate for disabled students by surveying their needs and developing programs to meet those needs.

Division of Information Technology (ITD), Cope Administration Bldg., Room 3, 615-898-5345

<http://www.mtsu.edu/itd/>

This office provides and supports effective utilization of computer and telecommunications technology. ITD assigns the user name and password to MTSU student accounts and also offers training on the Internet.

Financial Aid, James Union Bldg., Room 206, 615-898-2830

<http://www.mtsu.edu/financialaid/>

This office has counselors to provide information on loans, grants, and financial awards for students.

Health Services, Health Wellness and Recreation Center, 615-898-2988

<http://www.mtsu.edu/healthservices/>

Treatment of minor illnesses and injuries is available Monday through Friday. Students are seen on an outpatient basis and must be enrolled to utilize the services.

Housing and Residential Life Office, Keathley University Center, Room 300, 615-898-2971

<http://www.mtsu.edu/housing/>

The housing office manages both residence halls and apartments. Space in apartment housing is limited. The office also provides information on available off-campus housing.

Intercultural and Diversity Affairs, Keathley University Center, Room 124, 615-898-2238
<http://www.mtsu.edu/idac/>

This office provides registration assistance, financial aid, counseling, academic advising, tutoring, mentoring, and programming in multi-cultural awareness for minority students.

James E. Walker Library, 615-898-2772
<http://library.mtsu.edu/>

The state-of-the-art James E. Walker Library houses over 600,000 books and another 400,000 volumes of periodicals, newspapers, and research titles in micro-text formats. The Library receives subscriptions to over 3,400 periodicals and journals. The Voyager on-line catalog and circulation system is utilized, and a *Library Handbook* is available.

Public Safety, 1412 E. Main Street, 615-898-2424
<http://police.mtsu.edu/>

Student-Athlete Enhancement Center, Gate 1, Football Stadium, 615-904-8492
<http://www.mtsu.edu/saec/>

The directors monitor the academic performance of student athletes and provide additional assistance to all athletes on campus.

University College Advising Center (Academic Advising), McFarland Bldg., 615-898-2339
<http://www.mtsu.edu/advising/index.shtml>

Provides a number of support services including, the University Writing Center, the Prescribed Course Reading Lab, and the Prescribed Course Mathematics Lab

Women and Non-Traditional Students, June Anderson Women's Center, Keathley University Center 320, 615-898-5989
<http://www.mtsu.edu/jac/>

This office provides support groups, peer counseling, lectures, and workshops for female students. A full-time professional counselor is available for crisis intervention and personal counseling.

BIOLOGY FACULTY AND STAFF

Faculty Name	Email address	Office Phone (Area code 615)	Office Location
Murphy, George, Chair	gmurphy@mtsu.edu	898-2847	DSB 128
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Bergemann, Sarah	sbergema@mtsu.edu	494-7634	JH 335
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Farone, Mary	mfarone@mtsu.edu	904-8341	SBA 133
Herlihy, Christopher	cherlihy@mtsu.edu	898-2611	HH 1
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Walck, Jeffrey	jwalck@mtsu.edu	904-8390	DSB 120C
Wright, Stephen	smwright@mtsu.edu	898-2056	JH 330
Zamora, John	jzamora@mtsu.edu	898-2067	JH 340

SUPPORT STAFF

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