



EAST TENNESSEE STATE  
UNIVERSITY

College of Public Health

East Tennessee State University  
Department of Biostatistics and Epidemiology  
BSTA 5350  
Intermediate Biostatistics – Spring 2021 (Jan 11 ~ May 10)

**Meeting Times:** 1:00—3:50 pm, Monday  
**Meeting Location:** Lamb Hall 143  
**Instructor:** Shimin Zheng, PhD  
**Office:** Lamb Hall 46B; Phone 439-4327; Email zhengs@etsu.edu  
**Office Hours:** No office hours due to covid-19. But the instructor and GA are available to meet with students thru Zoom by appointment.

**TEACHING ASSISTANT**

**TEXTBOOK**

Eric Vittinghoff, David V. Glidden, Stephen C. Shiboski, Charles E. McCulloch (Department of Epidemiology and Biostatistics, University of California, San Francisco): Regression Methods in Biostatistics Linear, Logistic, Survival, and Repeated Measures Models (Statistics for Biology and Health), 2012 2nd Edition. Publisher: Springer-Verlag New York, LLC. ISBN: 978-1-4614-1352-3.

**PREREQUISITES**

EPID 5100, Analytic Methods in Public Health

**REQUIRED SOFTWARE**

Students must have access to SAS. In class, only SAS will be demonstrated. Homework assignments require that students perform analyses using SAS.

**COURSE DESCRIPTION**

This course introduces advanced statistical techniques. It includes lectures and comprehensive individual projects. The lectures cover topics on Analysis of Variance (ANOVA), Analysis of covariance (ANCOVA), linear correlation, simple linear regression, multiple linear regression, logistic regression, and survival analysis. Comprehensive individual projects involve exercises in data analysis and application of a statistical package.

**COMPETENCIES AND LEARNING OBJECTIVES**

The following **MPH Biostatistics Concentration** and **MPH Epidemiology Concentration**

competencies. The competencies are numbered (and bolded), and the associated course-specific learning objectives are in letters.

**MPH 1. Discuss and explain the theory and use of advanced statistical techniques with emphasis on multivariate regression methods.**

- a. Describe the assumptions underlying the one-sample t-test, the paired t-test and corresponding confidence intervals and use these methods to make statistical inferences.
- b. Describe the assumptions underlying one-way analysis of variance (ANOVA), perform ANOVA, analysis of covariance (ANCOVA) and multiple comparisons, and interpret the output, including sums of squares and F-tests.
- c. Estimate the association between two variables using Pearson's and Spearman's correlation coefficient.
- d. Describe the assumptions and mechanics for estimating parameters in simple and multiple regression models.
- e. Perform multiple linear regression analysis and interpret the output, including regression parameter estimates, hypothesis tests, confidence intervals, model fit, and potential confounding.
- f. Apply logistic regression analysis to public health data, interpret regression coefficients, derive odds ratios, test hypotheses, and perform model diagnostics.
- g. Fit appropriate survival analysis models (Kaplan Meier survival curves, Cox proportional hazards regression) to longitudinal data from epidemiological cohort studies, interpret results, and test hypotheses.

**MPH 2. Use common statistical software programs for advanced statistical analysis and interpretation of public health datasets.**

- a. Use SAS for Windows to perform correlation, linear regression, logistic regression, and survival analysis of public health data.

**MPH 3. Discuss and explain important ethical and oversight considerations for conducting human research, including compliance with regulations as reflected by Institutional Review Boards (IRB) and personal privacy issues.**

- a. Recognize the importance of de-identifying data and presenting results of statistical results in aggregate.

**MPH 4. Use information technology to access, evaluate, and interpret public health data.**

- a. Critically read and interpret the application of statistical analysis (correlation, linear regression, logistic regression methods, survival models) found in public health studies.

**MPH 5. Apply evidence-based principles and scientific knowledge to critical evaluation and decision-making in public health**

- a. Explain the tables, graphs and other outputs of advanced statistical data analyses to inform public health decision-making.

**MPH 6 (*Biostatistics Concentration only*) - Describe how different biostatistical methods can evaluate similar datasets and public health problems and discuss the strengths and weaknesses of the different approaches.**

- a. Describe the differences between correlation and regression analysis as tools for data analysis and evaluation.
- b. Evaluate the strengths, weaknesses, and appropriate uses of different regression methods.

**This course also addresses three (3) DrPH Core Competencies. Those competencies are listed and bolded below, together with the course-specific learning objectives that are linked to them.**

**DrPH Competency: Apply theoretical and evidence-based constructs from multiple disciplines in the design and delivery of public health programs, policies, and systems.**

Learning Objectives 1a–1g above are linked to this competency.

**DrPH Competency: Interpret quantitative and qualitative data using best practices and accepted scientific standards.**

Learning objectives 4a and 5a above are linked to this competency.

**DrPH Competency: Employ methods that protect the rights and welfare of individuals and communities involved in health research and practice.**

Learning Objective 3a above is linked to this competency.

## **COURSE EVALUATION**

There will be 10 quizzes, 5 labs, 10 homework assignments, one midterm and final examination, both close book. The examinations may consist of multiple choice, short answer, and statistical computations or interpretation of SAS output, and will be administered at the scheduled times. Make up examinations should be arranged in advance and will only be given under specific circumstances.

## **STUDENT ASSESSMENT OF LEARNING**

### **Course Assignments, Learning Objectives Assessed, and Contribution to Total Grade**

Homework (25%) – Students will apply the concepts, terminologies, formula learned in the course to do each homework. 10 total.

Quizzes (5%) – Open-book, not proctored, true/false and multiple choice problems, taken online via D2L. 10 total.

Lab (5%) – Open-book, not proctored, discussion among students is allowed and encouraged. For each lab, students will manage and prepare data sets for analysis of public health problems and formulate research questions to address public health issues. Students will conduct statistical modeling using statistical analysis software (SAS), then work on 10 multiple choice or multiple select questions for each lab assignment. Totally, five lab assignments, taken online via D2L.

Oral presentations (5%) – At the end of the semester, each student in this class is required to complete an oral presentation assignment about one specific topic of BSTA 5350 Intermediate

**OFFICIAL SYLLABUS WILL BE PROVIDED IN THE COURSE**

Biostatistics. Each presentation will last about ten minutes. The first 7-8 minutes of the presentation will be for you to speak followed by 5 minutes for responding to questions from the instructor and other students. The presentation should be done at 1-3:50 pm on Monday April 26, 2020, 143 Lamb Hall. Two (no more than 2) students should collaborate to work on one presentation. Find a published paper about public health issues using statistical analysis methods taught in this intermediate biostatistics class, such as simple and multiple linear or logistic regression and survival analysis. The paper must be published in 2016 or later. Your presentation should be based on that paper. Your presentation should include abstract, introduction, methods, statistical analysis, results, discussion (practical applications and conclusions) and **your** critiques (NOT critiques copied from the paper). Furthermore, it will be better if you can acquire the data for the paper and verify all statistical analysis results in the paper using the statistical software SAS/SPSS, although it is not required for such verification. Alternatively, you can present your own data analysis results. Students can download NHANES, NSCH, YRBSS or similar data sets about public health issues and do data analysis for a population-based study incorporating the use of advanced biostatistical methods taught in the class. You cannot repeat the same presentation you have done before. It must be totally new. You cannot use the same presentation for different courses. Otherwise, you cannot get any credit for your presentation.

Examinations (Midterm: 30%, Final: 30%) – Assessments of individual learning include scheduled course examinations. Both examinations are proctored, closed-book, and questions will be in multiple format. Midterm exam will cover lectures 1 through 6 and Final exam will cover lectures 7 through 11, and associated homework, quiz and lab assignments.

<b>Assignment</b>	<b>Learning Objectives Assessed</b>	<b>Percentage of Total Grade</b>
Homework	1a, 1b, 2a, 3b	25%
Mid-term exam	1a, 2a, 3b,6b	30%
Final exam	1a, 2a, 3b,6b	30%
Oral presentations	1b, 2a, 3a, 4a	5%
Lab	NA	5%
Quizzes	NA	5%
<b>Total point</b>	<b>NA</b>	<b>100%</b>

**Letter grade is given according to the College of Public Health guidelines**

**GRADING SCALE**

<b>Letter Grade</b>	<b>Percentage</b>
A	95-100%
A-	92-94%
B+	89-91%
B	86-88%
B-	83-85%
C+	80-82%
C	77-79%
F	<77%
I	Incomplete, discuss with instructor

**COURSE OUTLINE AND ASSESSMENT**

DATE	TOPIC	LEARNING OBJECTIVES	ASSESSMENT (Due by 5 pm Sunday)	REQUIRED READINGS (chapter)
Jan 25 Lec01	<b>Syllabus Review</b> <b>Descriptive and Basic Statistical Methods</b> Descriptive Statistics Measurement scales Measures of Location Measures of Dispersion Relations between variables t-test and Analysis of Variance (ANOVA) One-way ANOVA Multi-way ANOVA Analysis of covariance (ANCOVA) Pearson correlation Rank correlation	1a, 1b, 1c, 3a	HW 01 Quiz 01	1.1-1.4; 2.1-2.6; 3.1.1; 3.1.2; 3.1.3; 3.1.4; 3.1.5; 3.1.6; 3.1.7; 3.2
Feb 01 Lec02	<b>Simple linear regression</b> Random model Assumptions about the predictor Model fitting Hypothesis tests Confidence intervals Correlation and regression SAS demo	1d, 2a, 5a, 6a, 6b	HW 02 Quiz 02 Lab 01	3.3.1; 3.3.2; 3.3.3; 3.3.4; 3.3.5; 3.3.6; 3.3.7; 3.3.8; 3.3.9
Feb 08 Lec03	<b>Multiple linear regression (1)</b> Random model Model fitting Hypothesis test Correlation and regression Different predictors F-test Multiple comparisons Multiple correlation coefficient SAS demo	1d, 1e, 2a, 6a, 6b	HW 03 Quiz 03	4.1; 4.2.1; 4.2.2; 4.2.3; 4.2.4; 4.3.1; 4.3.2; 4.3.3; 4.3.4; 4.3.5
Feb 15 Lec04	<b>Multiple linear regression (2)</b> Confounding Linear model Control of confounding Examples SAS demo	1d, 1e, 5a, 6b	HW 04 Quiz 04 Lab 02	4.4.1; 4.4.2; 4.4.3; 4.4.4
Feb 22 Lec05	<b>Multiple linear regression (3)</b> Diagnostic in Multiple Linear Regression Mediation & Interaction Model assumptions Common misuse of regression model SAS demo	1d, 1e, 2a, 4a, 5a, 6b	HW 05 Quiz 05	4.5; 4.6; 4.7
Mar 01 Lec06	<b>Multiple linear regression (4)</b> Transformation Model selection	1e, 2a, 5a, 6b	HW 06 Quiz 06 Lab 03	4.7.1~ 4.7.4

OFFICIAL SYLLABUS WILL BE PROVIDED IN THE COURSE

	Stepwise regression Common mistakes in linear regression SAS demo			
Mar 08 Lec07	<b>Logistic regression (1)</b> Review for linear regression model Simple Logistic Model Multiple Logistic Regression Likelihood ratio test Confounding Interaction SAS demo	1f, 2a, 5a, 6b	HW 07 Quiz 07	5.1; 5.2
Mar 15	Spring break			
Mar 22	Midterm Exam (Covering Lectures 1 thru 6) 1:00-3:00 pm 143 Lamb Hall or ProctorU.	1a – 1f, 2a, 3a, 4a, 5a, 6a, 6b		All listed above
Mar 29 Lec08	<b>Logistic regression (2)</b> Model selections Logistic Regression With Categorical Predictors Point and CI of beta Estimation Point and CI of OR Estimation Sensitivity Specificity SAS demo	1f, 2a, 4a, 6b	HW 08 Quiz 08	5.1; 5.2
Apr 05 Lec09	<b>Logistic regression (3)</b> Goodness of Fit Model assumptions Diagnostics The Number of Indep Variables Analysis of Residuals Influence Diagnostic Statistics SAS demo	1g, 2a, 5a, 6b	HW 09 Quiz 09 Lab 04	5.4; 5.5
Apr 12 Lec10	<b>Survival analysis (1)</b> survival analysis Survival data and censoring Obj of survival analysis Methods of survival analysis Survival analysis of one group Survival ana comparing 2 groups SAS demo	1g, 2a, 5a, 6b	HW 10 Lab 05	6.1-- 6.6
Apr 19 Lec11	<b>Survival analysis (2)</b> Cox proportional hazard model Parametric vs. semi-parametric models Hypothesis tests Different predictors Confounding Mediation Interaction SAS demo	1g, 2a, 5a, 6b	Quiz 10 HW 11 will NOT be graded.	6.1-- 6.6
Apr 26	Students Presentation			

## OFFICIAL SYLLABUS WILL BE PROVIDED IN THE COURSE

May 03	Final exam (covering Lectures 7 thru 11): 1:00-3:00 pm 143 Lamb Hall or ProctorU.	1a – 1g, 2a, 3a, 4a, 5a, 6a, 6b		All listed above
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### COVID-19 AND ATTENDING CLASS ON CAMPUS

The best evidence we currently have from public health professionals is that wearing masks with proper distancing is the best way to protect against the spread of COVID-19 and other airborne illnesses. **In consideration of all students, faculty, and staff, everyone is expected to wear a mask which covers the nose and mouth while in any building associated with the College of Public Health.** If you choose not to wear a mask, you will not be able to attend class or meet with members of the college face to face. If you forget your mask a few will be available each day to distribute in department suites. Refusal to comply with this directive in the classroom will likely result in the dismissal of class and the inconveniencing of all. Be assured that support materials available online should be adequate to ensure your success in the course should you decide not to attend for any reason.

As a community of current and future public health professionals, wearing of a mask communicates the care and respect we have for ourselves and those around us as well as the broader community that is impacted by our decisions on campus. We feel that the College of Public Health at East Tennessee State University should be proud to set a standard that ensures health and safety while providing a complete educational experience. (<https://www.etsu.edu/curriculum-innovation/syllabusattachment.php>).

#### Exemptions

Students and employees who need to request accommodations related to the wearing of a facial covering/mask should contact the Office of Disability Services and provide related documentation supporting the request. Some examples of accommodations could include taking the online version of a course, a faculty member wearing a clear facial covering/mask that permits lip reading, or wearing a face shield instead of a mask. Disability Services may be contacted at (423) 439-8346 or email Director Mary Little at [littleme@etsu.edu](mailto:littleme@etsu.edu).

### GENERAL POLICIES and SUGGESTIONS

1. Students should read the assigned readings including chapters in the textbook.
2. Students are not required, but encouraged to attend class from remote synchronously. You are allowed to watch the recordings later on within 2 days if you are not available during the regular class time.
3. Students are expected to check Desire2Learn (D2L) website frequently for announcements, lecture notes, and assignments, once or twice a day.
4. Disruptive in-class behavior, such as talking or reading the newspaper, will not be tolerated.
5. Do all of the assigned homework, quizzes and labs promptly and submit all assignments on the due dates.
6. Cheating will be punished in accordance with University policies.
7. Be prepared to use SAS software to perform data analyses. SAS is at ETSU: <https://goldlab.etsu.edu/>. For more information, please see <http://www.etsu.edu/oit/helpdesk/>

## OFFICIAL SYLLABUS WILL BE PROVIDED IN THE COURSE

goldlab.aspx. Mac users are unable to use software SAS online thru ETSU 'goldlab'. It is your responsibility to have a reliable and stable internet connection and a relatively new windows personal computer if you are unable to use a computer on ETSU campus on a regular basis.

8. Submit all assignments on the due dates. Each assignment is usually due Sunday (by 5 pm). If you delay your assignment, you will get 10 to 20% off from your score. Assignments delayed more than two days are not accepted and would be scored as 0. Students are required to submit solutions electronically by using the Dropbox tool in the D2L. You should show all work and all steps for your homework and exams, only the general conclusion or the last number will not be credited, except those multiple choices and true or false questions. Students are allowed to discuss the problems sets, may consult the instructor, and the GA on homework, but each students must submit their own work (no copying). The material on the exams is a fair representation of the assigned homework, quizzes, labs and the material covered in class. If you do not understand a particular topic, seek help before the exam.

9. Contact the instructor or the GA if you need help or you have any concern. We will reply within 24 hours Monday-Friday and 48 hours on weekend.

10. Mid-term and final exam will be held in Lamb Hall 143. You are allowed to do your midterm exam using ProctorU if you have covid-19 or covid-19 symptoms, or you worry about covid-19, or your living area is far away from ETSU campus. It is students' responsibility to pay the ProctorU fees.

### INCLEMENT WEATHER POLICY

The official radio station for reporting the status of classes and other activities of East Tennessee State University during inclement weather is WETS-FM 89.5. All students are to govern themselves according to the status as reported by this station for the University.

### NON-DISCRIMINATION POLICY

East Tennessee State University is an AA/EEO employer and does not discriminate on the basis of race, color, national origin, sex, disability, or age in its programs and activities. The following person has been designated to handle inquiries regarding the non-discrimination policies: Special Assistant to the President for Equity and Diversity and Title IX Coordinator and may be contacted at: 206 Burgin E. Dossett Hall, Johnson City, TN 37614, 423-439-4211, [equity@etsu.edu](mailto:equity@etsu.edu) or via this webpage: <http://www.etsu.edu/equity/compliance.aspx>. Additionally, the Title IX Coordinator is designated to monitor and oversee Title IX complaints.

### TECHNICAL SPECIFICATIONS & SUPPORT

It would be helpful for you to have information about where to go if you run into technical problems. The following information is included about the Student Help desk (<http://www.etsu.edu/oit/computing/instructions/help.asp>) and the D2L pages created specifically for students (<http://www.etsu.edu/d2l/students.aspx>.) Also, since most of our content is in Microsoft format, it would be helpful for you to have links to free readers in case you do not have access to these programs on your home computers. This page contains links to most of the Office viewers: <http://office.microsoft.com/en-us/downloads/HA010449811033.aspx>.

SYLLABUS ATTACHMENT: WE ARE VERY CONCERNED ABOUT YOUR SUCCESS AS A STUDENT AT ETSU. THIS INFORMATION IS PROVIDED AS A QUICK REFERENCE GUIDE



NOTE: Any student that is receiving full Financial Aid (loans, scholarships, lottery, or grants) must authorize the university to use Financial Aid funds to pay the student account. A Financial Aid Agreement Promissory Note must be provided by the student either online or through the Financial Aid Office, unless payment in full is submitted. Fee payment must be completed by the close of business on the day before classes begin. Important Dates can be found on the Academic Calendar. (<http://www.etsu.edu/etsu/academic/ates.asp>).

ETSU DIVERSITY STATEMENT: East Tennessee State University recognizes that the pursuit of knowledge and understanding is enriched by an environment in which people of diverse backgrounds learn together and from each other, and participate in free and genuine exchange of views. It recognizes that all members of the University community benefit from diversity and that the quality of learning, research, scholarship and creative activities is enhanced by a campus climate of inclusion, understanding, and appreciation of differences and the full range of human experience. ETSU must prepare students to function successfully in a diverse society. A university diverse in its people, curricula, scholarship, research, and creative activities expands opportunities for intellectual inquiry and engagement, helps students develop critical thinking skills, and prepares students for social and civic responsibilities.

ETSU aspires to be an institution that celebrates diversity by welcoming all students, faculty, administrators and staff as respected and valued participants in the University's educational mission. Therefore, ETSU welcomes people of different races, ethnicities, religions, creeds, national origins, genders, sexual orientations, physical abilities, ages, veteran status, and social, economic, or educational backgrounds. ETSU is particularly committed to welcoming groups that have been traditionally underrepresented or excluded. The University also supports and encourages the promotion of diversity in its curricula, programs, faculty research, scholarship, and creative activities.

ACADEMIC ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES: It is the policy of ETSU to accommodate students with disabilities, pursuant to federal law, state law and the University's commitment to equal educational opportunities. Any student with a disability who needs accommodation, for example arrangement for examinations or seating placement, should inform the instructor at the beginning of the course. Faculty accommodation forms are provided to eligible students by Disability Services. Disability Services is located in the D.P. Culp Center, Room 326, telephone 439-8346. <http://www.etsu.edu/students/isable/>

HONOR CODE: East Tennessee State University is committed to developing the intellect and ethical behavior of its students. Students found to be in violation of policies on plagiarism, cheating, and/or fabrication will be held accountable for their actions. Any knowledge of academic misconduct should be reported. Students are expected to act with honesty, integrity, and civility in all matters.

HONOR PLEDGE: By becoming a member of the campus community, students agree to live by the standards of the honor code and, thereby, pledge the following: "I pledge to act with honesty, integrity, and civility in all matters." (Honor Code and Pledge as revised and adopted February 16, 2012.)

ACADEMIC MISCONDUCT APPEAL: Any act of dishonesty in academic work constitutes academic misconduct and will be subject to disciplinary action. This includes plagiarism, the changing or falsifying of any academic documents or materials, cheating,

and the giving or receiving of unauthorized aid in tests, examinations, or other assigned school work. Charges of academic misconduct may be brought by members of the faculty, staff or student body. The administration of discipline for academic misconduct is in accordance with procedures specified in the Academic Misconduct Policy.

Appeal from a finding of guilt of academic misconduct and imposition of a sanction for the offense may be taken to the president of the university. A written notice of appeal must be submitted by the student to the university president within five days after being notified of the dean's decision on the case. The appeal must consist of a signed statement elaborating the respects in which the student considers the decision wrong.

#### WHAT YOU NEED TO KNOW! Heading

Student email: ALL registered ETSU students have a campus email account (@etsu.edu). Please activate your account and check weekly. Email is our primary communication

resource for students. To activate your account follow directions at: <http://www.etsu.edu/oit/studentinfo/goldmail.aspx>

**PREREQUISITES:** Many courses require prerequisites or special approval of the instructor prior to registration. Students should verify that they meet the requirements for course registration in the university undergraduate or graduate catalog. Failure to comply with the stated prerequisites may result in the student being withdrawn from a course.

**PERMITS AND OVERRIDES:** A student may add courses with special permission in the form of an electronic permit if the courses have reached the established maximum enrollment. To add any class that has reached the enrollment limit requires permission of the instructor and department chair. After the registration/late add period, special permission in the form of a hard copy late add form and an electronic permit must be obtained from the instructor, the department chair, the dean and the registrar. Students may view permits on GoldLink under Registration Status

**HOW TO CONTACT A FACULTY MEMBER:** If you have questions regarding your class, talk to your instructor. Faculty members usually include their office hours, phone number and/or email in your class syllabus. If you cannot locate this information, set a time to meet with your instructor by speaking with him/her prior to or immediately following your class session. You may also conduct a "People Search" on [www.etsu.edu](http://www.etsu.edu).

**CLASS ATTENDANCE IS IMPORTANT!** Attendance usually has a high correlation with how well you do in a course. It is important to talk to your instructor about any absences. Many instructors consider attendance so essential that your grade will be affected by your absence. **SOME DEPARTMENTS AND PROFESSORS HAVE MANDATORY**

**ATTENDANCE POLICIES.** Your Financial Aid will be reduced if you do not attend class. Check your course syllabus, or ask your instructor, for this information.

**WHERE TO GO FOR HELP?**

**UNDERGRADUATE ADVISEMENT:** All students with less than 60 earned credits are required to meet with an advisor prior to registration each semester. Transfer students are required to meet with an advisor prior to registration for the first and second term of enrollment. Readmitted students are required to meet with an advisor prior to registration their first term back at ETSU. These are the minimum advisement requirement. Some colleges and departments may have additional advisement requirements. Students should consult with their academic advisor to determine advisement requirements. Please visit <http://www.etsu.edu/advisement/continuingstudents/AdvisorContactList.aspx> or contact the ARC for a referral ([arc@etsu.edu](mailto:arc@etsu.edu) or 423-439-8650).

#### ADVISEMENT RESOURCES CAREER CENTER (ARC)

The ARC is located on the 2nd level of the D.P. Culp University Center located next to the Bookstore, phone 423-439- 8650. The ARC is open Monday - Friday 8:00 a.m.-4:30 p.m.

The ARC is staffed by professionals who evaluate students' academic progress as it relates to their personal aspirations and career goals. In addition to advising students, referrals for additional academic assistance are made when necessary. The ARC is user-friendly so that students can access advisement, career and support services without ever leaving the facility. The ARC serves as a primary resource for students who have a variety of needs including those who are entering the university for the first time, those who are unsure about an academic major or career option, and those who wish to take advantage of various academic support services to enhance their classroom learning.

The ARC incorporates several academic and student support services listed below.

**UNIVERSITY ADVISEMENT CENTER:** (423-439-5244) The UAC provides academic, career and personal counseling to those students who have not declared a specific major and those requiring Learning Support in Reading or Writing (students requiring Learning Support in Math only should see their major advisor) courses. By focusing on all aspects of student life, the UAC is able to assist each student in achieving academic success and attaining personal goals. In academics and career planning, Counselors help students understand academic requirements and identify career options that affirm their academic strengths and interests. As a campus resource, Counselors assist students with accessing the wide variety of campus services to meet their needs. Visit our website at <http://www.etsu.edu/uac> or call 423-439-5244.

**ADULT, COMMUTER, AND TRANSFER SERVICES:** (423-439-5641) Personalized counseling advisement for adult, commuter, and transfer students. Commuting Student Services: rideshare, off-campus housing listings, transit schedules, area maps and childcare information. One-Stop Shopping: campus forms, applications and information. Scholarships: Reentry Student Scholarship. Student Organizations: Alpha Sigma Lambda (ASL), the adult student honor society and Tau Sigma, the honor society for transfer students. Advocates for: adult, commuter, and transfer students within the greater campus community. Visit our website at [www.etsu.edu/students/acts](http://www.etsu.edu/students/acts).

**ARTS AND SCIENCES IN THE ARC:** (423-439-5248) The Associate Dean for the College of Arts and Sciences is available in the ARC for dean's signature on student documents. Limited advisement available for majors in Criminal Justice and Criminology, Biology majors with fewer than 60 credits, Mass Communications-

undecided concentration and Radio/TV/Film concentration, Psychology (< 60 credits),  
See website for more details: [www.etsu.edu/cas](http://www.etsu.edu/cas).

**UNIVERSITY CAREER SERVICES:** (423-439-4450) Provides students and alumni with individual assistance in researching, planning and locating job and internship opportunities. Internships, available in most disciplines, offer an opportunity to earn academic credit for approved work experiences in business, industry, government, and health agencies. The office maintains BucLink, an employer generated job list and search service at [www.etsu.edu/careers](http://www.etsu.edu/careers). All students are encouraged to register on BucLink and visit the UCS office for help with resumes, effective job search techniques, preparing for interviews, and other career-related assistance. Numerous class presentations, on-campus interviews, career fairs and special programs are sponsored throughout the year.

**MEDICAL PROFESSIONS ADVISEMENT:** (423-439-5602) The Office of Medical Professions Advisement provides information, academic advisement, and other support functions to students who wish to be admitted to professional schools in medically related disciplines. Among those disciplines are medicine, pharmacy, dentistry, osteopathic medicine, physician assistant, podiatry, optometry, veterinary medicine, and chiropractic medicine. Premedical Professions are programs, not majors. Students are encouraged to select an academic major in addition to meeting admissions requirements for the professional school of their choice. Professional schools do not usually require or even suggest a specific major and/or minor, but most schools do recommend that students seek a solid, broad-based, general undergraduate education with substantial exposure to the humanities and social sciences while excelling in science and math. In addition, students are expected to participate in practical experience/shadowing and volunteerism throughout their college experience. For more information please see our office at 423-439-5602 or visit our website at [www.etsu.edu/cas/mpa.nk](http://www.etsu.edu/cas/mpa.nk) Heading

**CAREER EXPLORATION CENTER:** (423-439-8651)-Located in the ARC, the Career Exploration Center is a starting place for students who are uncertain about their choice of academic major or career. With the assistance of our professional staff, career interest inventories, personality inventories, and an extensive career library, we can help students identify career options that suit their personal needs. These services are free to current ETSU students. Limited services are available to potential students and ETSU alumni. Visit our website at <http://www.etsu.edu/students/careers/common/careerdevelop.aspx>

**Scholarship Office:** (423-439-7094) Located on the 2nd floor of the Culp Center. Coordinates most of the academic and need based scholarships. The office provides information and scholarship applications for ETSU scholarships and serves as a resource for external scholarship information. Visit our website at [www.etsu.edu/scholarships](http://www.etsu.edu/scholarships)  
Tennessee Education Lottery Scholarship Renewal Criteria.

Do you have a Tennessee Education Lottery (TELS) Scholarship? To retain Tennessee Education Lottery Scholarship eligibility, you must earn a cumulative GPA of 2.75 after 24 and 48 attempted TELS hours and a cumulative TELS GPA of 3.0 at the 72 and 96 attempted TELS hour checkpoints. You may qualify with a 2.75 cumulative TELS GPA after 72 attempted TELS hours and/or 96 attempted TELS hours if you are enrolled full-time and have earned a semester GPA of at least 3.0 for the term in which you reach the

checkpoint. Dropping a class may negatively impact your eligibility for a TELS award. If your enrollment status changes from full-time (12 hours or more) to part-time (11 hours or less) or from half-time (6-11 hours) to less than half-time (less than 6 hours) you will lose your TELS eligibility for all future terms. You must also stay continuously enrolled (at least one credit hour) each fall and spring term in order to remain TELS eligible. Appeals are available in situations of extenuating circumstances. TELS recipients are eligible to receive the scholarship for a maximum of five years from the date of initial enrollment, or until reaching 120 attempted lottery hours or earning a baccalaureate degree. For additional TELS rules go to: <http://www.etsu.edu/scholarships/lh/dlh.aspx>

**OTHER RESOURCES**

**CENTER FOR ACADEMIC ACHIEVEMENT:**

(423-439-7111) Located on the first floor of the Sherrod Library, the Center for Academic Achievement (CFAA) is the place to go for help with writing and speaking, library research, core math and science courses, and other subjects. The center offers tutoring on a walk-in and appointment basis and is open during library hours, including nights and weekends. Call 439-7111 or go to [www.etsu.edu/academicaffairs/cfaa](http://www.etsu.edu/academicaffairs/cfaa) for more information.

**STUDENT GOVERNMENT ASSOCIATION: (423-439-5325) visit:**

<http://www.etsu.edu/sga> or email - [SGA@mail.etsu.edu](mailto:SGA@mail.etsu.edu)

**MENTAL HEALTH:** Students often have questions about mental health resources, whether for themselves, a friend or a family member. There are many resources available on the ETSU Campus, including:

ETSU Counseling Center Nell Dossett Hall, 3rd Floor, 423-439-3333

BucsPRESS2: 24-hour Mental Health Helpline, 423-439-4841

ETSU Behavioral Health & Wellness Clinic: 423-439-7777

ETSU Community Clinic: 423-439-4187

If you or a friend are in immediate crisis, Call 911.

The National Suicide Prevention Lifeline is available 24 hours per day at 1-800-273-TALK (8255)

For helpful information on campus resources and mental health visit

[www.etsu.edu/etsupeaks](http://www.etsu.edu/etsupeaks) or <http://www.facebook.com/peaks.etsu>

**CAMPUS RECREATION: (423-439-7980)** Campus Recreation offers programs and services through the Center for Physical Activity and Basler Challenge Course in five areas: intramurals, fitness, outdoor adventure, non-credit instruction, and sports clubs. Any questions regarding the programs and services offered by the Department may be answered by visiting our website at [www.etsu.edu/rec](http://www.etsu.edu/rec) or by calling 423-439-7980.

LIBRARIES	PHONE
Sherrod Library:	866-542-3878
ETSU at Kingsport Library:	423-392-8010

Medical Library:	423-439-6252
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**BOOKSTORES:** The ETSU Bookstore has special hours at the beginning of each semester. For more information please call 423-439-4436.

For information about our off-campus location, the College Store, located on West Walnut Street, call 926-0838.

The Kingsport Bookstore is only available during the first week and last week of each term. For information about the Kingsport Bookstore's hours, call 392-8000.

**COMPUTER LABS:** For information on all OIT labs, call 423-439-8211. Information on equipment, location, and operating systems available at <http://www.etsu.edu/oit/facultystaffinfo/complabinfo.aspx>

D.P.Culp Computer Lab:	423-439-8211
Lucille Clement:	423-439-7913
Library Computer Lab:	423-439-5334

Other open labs and contacts: Sam Wilson 318/320 (contact College of Business, 439-5271), Kingsport Center (contact main office, 392-8000).

**UNDERGRADUATE CORE EXIT EXAMINATION:** This exam is required for graduation and should be taken when students have completed 96 hours and their general education courses. For information about the test, go to the University Testing Center web site at <http://www.etsu.edu/uged/cfaa/testing/default.aspx>

**GRADUATION:** Undergraduate students should file their Intent to Graduate two semesters prior to graduation. <http://www.etsu.edu/reg/graduation/graduationforms.aspx>

**SEEK ANSWERS TO YOUR QUESTIONS:** The ETSU Faculty and Staff want you to be successful in your educational pursuits. If you have any questions or concerns, seek help EARLY. We are here to assist you.

Technology Services and Assistance:

[http://www.etsu.edu/oit/Registration Help Line:](http://www.etsu.edu/oit/RegistrationHelpLine)

423-439-5584 (M-F, 8:00am – 4:30pm)

Policies and Procedures, Resources, Programs of Study and much more: ETSU Online Catalog: <http://catalog.etsu.edu>. HAVE A GREAT SEMESTER!