Instructor: Dr. Robert Wiggers, BIOL Department
Office: Room 204 Miller Science Bldg; 468-2147 / rwiggers@sfasu.edu
Office hours: MTWRF 10:30 am -12: pm; (all office hours via ZOOM); by appointment via ZOOM.
Class Time & Place: Online, asynchronous; NO LIVE STREAMING OR FACE – TO – FACE MEETINGS

Course Description: Three semester hours, three hours lecture per week. Structure and function of, primarily, eukaryotic cells. Topics include architecture of the cell and function of cellular components, the cytoskeleton, interactions between the cell and the extra-cellular matrix, regulation of cell growth, differentiation, and division, and mechanisms of cellular transport.

Pre-requisites: Bio 3453
Co-requisites: None

Credit Hour Justification. BIOL 4351 "Cellular Biology" (3 credits lecture) spans 15 weeks as a fully online experience. Students are required to complete assignments based on readings in the textbook and D2L modules, including homework assignments on the publisher supported web platform. Students must complete exams over the course content. Successful completion of all elements for the course requires at least 12 hours of student work each week.

Course Requirements: Four major exams; homework assignments associated with each content module. These homework assignments are accessed via the publishers supported website “SmartWorks”; reading – you are expected to read each chapter assigned in the course calendar as well as all content modules.

Program Learning Outcomes: PLO #1 – Knowledge, PLO #3 – Critical Thinking (BS Biology)

Student Learning Outcomes:

- SLO – 1: Describe sub-cellular structures and how they contribute to normal cell physiology (PLO #1).
- SLO – 2: Explain cellular processes and mechanisms that contribute to normal cell physiology (PLO #1, #3)
- SLO – 3: Be able to quantify energy changes mediated during cellular processes (PLO #1, #3).

What you need for this course:

- Access to D2L: It is here that you will find the course units, content modules, and exams.


- Technology Requirement: As you have elected to enroll in an online course, it is your responsibility to acquire a consistent, stable, dependable computer and internet connection with which to complete the assignments for the course by the deadlines indicated on the Semester Calendar. It is not the responsibility of the instructor to provide additional time for assignments or exams or an alternative means of completing the course due to technological issues on your part. Just as it is your responsibility to acquire and maintain adequate transportation to attend a face-to-face course, it is your responsibility to secure the technological means to participate in and complete this course. If you are having technical issues with D2L, please call the student help line at 936-468-1919 or e-mail at d2l@sfasu.edu. Live support is available from 8 am CST to 5 pm CST, Monday through Friday. For general technical issues, you may call the Technical Help Desk at 936-468-4357; they are available M – F, 8 am to 5 pm, CST. It is your responsibility to ensure you are able to access Smartworks; for technical issues, please contact their student support services from the Smartworks website.
Course Calendar in Brief – tentative (subject to change)

<table>
<thead>
<tr>
<th>TOPIC</th>
<th>TEXT CHAPTERS</th>
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<tbody>
<tr>
<td><strong>Cellular Function &amp; Structure (~55 % of course)</strong></td>
<td></td>
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<tr>
<td>The Importance of Water</td>
<td>NA</td>
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<tr>
<td>Energy, Catalysis, &amp; Biosynthesis</td>
<td>3</td>
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<tr>
<td>Protein Structure &amp; Function</td>
<td>4</td>
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<tr>
<td><strong>EXAM 1: SEPTEMBER 15</strong></td>
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<tr>
<td>Membrane Structure</td>
<td>11</td>
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<tr>
<td>Transport Across Cell Membranes</td>
<td>12</td>
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<tr>
<td>Cytoskeleton</td>
<td>17</td>
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<tr>
<td><strong>EXAM 2: OCTOBER 13</strong></td>
<td></td>
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<tr>
<td><strong>Transport, communication, &amp; integration (~20 %)</strong></td>
<td></td>
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<tr>
<td>Intracellular Compartments &amp; Protein Transport</td>
<td>15</td>
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<tr>
<td>Cell Signaling</td>
<td>16</td>
</tr>
<tr>
<td>Cell communities: Tissues, Stem Cells, &amp; Cancer</td>
<td>20</td>
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<tr>
<td><strong>EXAM 3: NOVEMBER 10</strong></td>
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<tr>
<td><strong>Metabolism (~20 %)</strong></td>
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<tr>
<td>How Cells Obtain Energy From Food</td>
<td>13</td>
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<tr>
<td>Energy Generation In Mitochondria &amp; Chloroplasts</td>
<td>14</td>
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<tr>
<td><strong>The Cell Cycle (~5 %)</strong></td>
<td></td>
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<tr>
<td>The Cell Division Cycle</td>
<td>18</td>
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<tr>
<td><strong>EXAM 4: DECEMBER 11</strong></td>
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ALL TIMES ARE CENTRAL – THERE IS A DETAILED SEMESTER CALENDAR BEGINNING ON THE NEXT PAGE.
<table>
<thead>
<tr>
<th>Date</th>
<th>Topics</th>
<th>What You Should Be Doing… All times are Central Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week of Aug. 28</td>
<td>• “Getting Started” D2L module</td>
<td>• Read the course syllabus and calendar; Establish access to the Norton Homework site.</td>
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<tr>
<td></td>
<td>• “The Importance of Water” D2L module</td>
<td>• Read “The Importance of Water” — there IS NOT TEXT CHAPTER OR HOMEWORK ASSOCIATED WITH THIS.</td>
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<td></td>
<td>• “Energy, Catalysis, &amp; Biosynthesis” D2L module and text chapter 3</td>
<td>• Begin reading D2L module “Energy, Catalysis, &amp; Biosynthesis”; begin reading chapter 3; begin associated Norton Homework.</td>
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<tr>
<td>Week of Sept. 4</td>
<td>• “Protein Structure and Function” D2L module and text chapter 4</td>
<td>• Continue reading D2L module “Energy, Catalysis, &amp; Biosynthesis”; continue reading chapter 3; continue Norton homework assignment for text chapter 3</td>
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<td></td>
<td></td>
<td>• Begin reading D2L module “Protein Structure and Function”; begin reading chapter 4; begin associated Norton homework.</td>
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<tr>
<td>Week of Sept. 11</td>
<td>EXAM 1, SEPTEMBER 15; covers D2L modules “The Importance of Water”, “Energy, Catalysis, &amp; Biosynthesis”, and “Protein Structure and Function”; chapters 3 – 4; Norton homework associated with those chapters</td>
<td>• Finish reading D2L modules “The Importance of Water”, “Energy, Catalysis, &amp; Biosynthesis” and “Protein Structure and Function”; finish reading chapters 3, 4; finish associated Norton homework</td>
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<td>• Norton Homework associated with chapters 3 &amp; 4 is due no later than 10 pm, September 14.</td>
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<td>• Exam 1 opens at 12:01 am on SEPTEMBER 15 AND IS DUE BY 10 pm on the same day</td>
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<tr>
<td>Week of Sept. 18</td>
<td>• Begin “Membrane Structure” D2L module and text chapter 11</td>
<td>• Begin reading D2L module “Membrane structure” and reading text chapter 11; begin associated Norton Homework.</td>
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<tr>
<td>Week of Sept. 25</td>
<td>• Transport Across Cell Membranes” D2L module; text chapter 12; associated Norton homework</td>
<td>• Continue studying D2L module “Membrane Structure” D2L module, reading chapter 11, working associated Norton homework.</td>
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<tr>
<td></td>
<td></td>
<td>• Begin reading D2L module “Transport Across Cell Membranes”; begin reading chapter 12; begin Norton homework.</td>
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</tbody>
</table>
| Week of Oct. 2 | • “Cytoskeleton” D2L module and text chapter 17 | • Continue studying D2L modules “Membrane Structure” and “Transport Across Membranes”; continue reading chapters 11 & 12; continue working Norton homework assignments for chapters 11 & 12.  
• Begin reading D2L module “Cytoskeleton”; begin reading chapter 17; begin associated Norton Homework. |
| --- | --- | --- |
• Norton Homework associated with chapters 11, 12, 17 is due no later than **10 pm, October 12**.  
• Exam 2 opens at **12:01 am on OCTOBER 13 AND IS DUE BY 10 pm on the same day** |
| Week of Oct. 16 | • “Intracellular Compartments & Protein Transport” D2L module and chapter 15. | • Begin reading D2L module “Intracellular Compartments & Protein Transport”; begin reading chapter 15; begin associated Norton homework. |
| Week of Oct. 23 | • “Cell Signaling” D2L module and text chapter 16 | • Continue reading D2L module “Intracellular Compartments & Protein Transport”; continue reading chapter 15; continue working associated Norton homework.  
• Begin reading D2L module “Cell Signaling”; begin reading chapter 16; begin associated Norton homework. |
| Week of Oct. 30 | • “Cell Communities – Tissues, Stem Cells & Cancer” D2L module and text chapter 20 | • Continue reading D2L modules “Intracellular Compartments & Protein transport” and “Cell Signaling”; continue reading chapter 15 & 16; continue working associated Norton homework.  
• Begin reading D2L module “Cell Communities – Tissues, Stem Cells & Cancer”; begin reading chapter 20; begin associated Norton homework. |
| Week of Nov. 6 | EXAM 3, NOVEMBER 10; covers D2L modules “Intracellular Compartments & Protein Transport”, “Cell Signaling”, and “Cell Communities – Tissues, Stem Cells, & Cancer”; text chapters 15, 16, & 20; Norton homework associated with those chapters. | • Finish studying “Intracellular Compartments & Protein Transport”, “Cell Signaling”, and “Cell Communities – Tissues, Stem Cells, & Cancer”; finish reading chapters 15, 16, & 20; finish associated Norton homework.  
• Norton Homework assignments for chapters 15, 16, & 20 are due no later than **10 pm, November 9**.  
• Exam 3 opens at **12:01 am NOVEMBER 10 and IS DUE BY 10 pm on the same day** |
| Week of Nov. 13 | • “How Cells Obtain Energy From Food” D2L module and text chapter 13 | • Begin reading D2L module “How Cells Obtain Energy From Food”; begin reding chapter 13; Begin associated Norton homework. |
| Week of Nov. 20 | Thanksgiving Break – Nothing Opens | Continue studies as needed |
| Week of Nov. 27 | • “Energy Generation in Mitochondria & Chloroplasts” D2L module and text chapter 14  
• “The Cell Division Cycle” D2L module; text chapter 18 | • Continue reading D2L module “How Cells Obtain Energy From Food”; continue reading chapter 13; continue associated Norton Homework.  
• Begin reading D2L module “Energy Generation in Mitochondria & Chloroplasts”; begin reading chapter 14; begin associated Norton homework.  
• Begin reading D2L module “The Cell Division Cycle”; begin reading chapter 18; begin associated Norton Homework. |
| Week of Dec. 4 | • Dead Week – No More Modules | • Finish reading D2L modules “How Cells Obtain Energy From Food”, “Energy Generation in Mitochondria & Chloroplasts”, and “The Cell Division Cycle”; continue reading chapters 13, 14, 18; continue associated Norton Homework assignments  
• Finish Norton Homework assignments for chapters 13, 14, & 18 by 10 pm DECMEBER 8; note Friday instead of Thursday |
| Week of Dec. 11 | • Exam 4 is on Dec. 11; It will open at 12:01 am on December 11 and close at 10 pm on the same day. It will cover D2L modules “How Cells Obtain Energy From Food”, “Energy Generation in Mitochondria & Chloroplasts”, and ”The Cell Division Cycle”; text chapters 13, 14, 18; the Norton Homework associated with those chapters. |
Expectations for Students in BIO 4351 online

1. **Technical Preparation:** The technical nature of the course demands preparation on your part. Students should submit all assignments early enough to account for technical difficulties. **In the event of a technical catastrophe** (e.g. the university’s main fiber optic line gets severed, a hurricane floods telecommunications hubs in Houston, the D2L server goes down, etc.---all of these things have happened), please do not inundate the Biology Department with phone calls. I will communicate with the class as soon as is technically possible.

2. **This course is not self-paced.** It is your responsibility to read and analyze the information in each module, participate in the module activity, and complete any pertinent assignments by the due date(s). This course demands a high degree of student involvement. You are not sitting in a lecture hall listening to me three hours each week. Instead, you must discipline yourself to (a) devote the time you normally would spend in the classroom to being logged in to this online class and digesting the week’s material, and (b) study a respectable amount in addition to the “in-class” time. Most universities recommend that for every hour a student spends learning in the classroom, he/she spend three hours studying outside of class. If you were taking this class in a face-to-face format, you would be expected to spend 3 hours per week in class AND, as this is a three-hour course, you would expect to spend roughly nine hours a week OUTSIDE OF CLASS reading, analyzing, synthesizing, studying, and completing assignments. This equates to, minimally, 12 hours per week of course engagement. As this is an asynchronous online class, you can expect to spend, minimally, the same 12 hours per week studying material, preparing for exams, etc. Online learning is far more active than traditional lectures and requires much more self-discipline to put in the time necessary to succeed.

3. **You should be logging onto D2L on a regular basis.** In addition to the detailed course calendar, all assignments are entered into the D2L calendar.

4. **Due dates are firm.** Late assignments are not accepted. Once an assignment or exam is closed, it will not be re-opened (see excused absence explanation above regarding make-up exams).

**Grading**

**Exams.** Four 100 point exams will be given during the semester. The dates and topics covered on each are in the previous "Course Calendar". There is no comprehensive final examination. Your score on the (4) exams will be averaged to give an "Exam Average". All exams will be administered via D2L. Open and close times are stipulated in the semester calendar.

**Homework.** The publisher of this text book has a web based set of homework assignments to accompany each chapter. They can be accessed from D2L: Look in the "Norton" content module for a WW Norton Homework link. Each D2L module (With the exception of The Importance of Water) and book chapter will have an associated homework assignment. Due dates will be specified on the Norton web site -- generally, all homework assignments to be covered on an exam must be completed BY 10 pm THE DAY BEFORE THE EXAM. Each homework assignment is equally weighted and your grade on each will be averaged to give a “Homework Average”.

Your Final Grade for BIO 4351 will be determined using the following formula:

\[(0.35)(\text{Homework Average}) + (0.65)(\text{Exam Average}) = \text{Total Point Score}\]

The breakdown below shows you the relationship between “Total Point Score” and letter grades:

- Total Point Score = 90 – 100; (A)
- Total Point Score = 80 – 89; (B)
- Total Point Score = 70 – 79; (C)
- Total Point Score = 60 – 69; (D)
- Total Point Score <60; (F)
Class Attendance

You can find SFA’s official policy regarding absences [here](#). Below is a relevant excerpt:

“At the discretion of the instructor, students may be excused from attendance for reasons such as health, family emergencies, or student participation in approved university-sponsored events. When possible, students should notify their instructors in advance about absences. Students are responsible for providing documentation in a timely manner to the instructor for each absence. The instructor determines whether such documentation is satisfactory.”

“Students with accepted excuses may be permitted to make up work for absences equaling no more than 15% of the scheduled course meeting time for the term, depending on the nature of the missed work. The timeline for completing make-up work will be determined by the instructor.”

ALL REQUESTS FOR AN EXCUSED ABSENCE MUST BE MADE THROUGH THE SFASU DEAN OF STUDENTS WEBSITE (as per new UT policy). You may navigate to: [https://www.sfasu.edu/deanofstudents/about/welcome](https://www.sfasu.edu/deanofstudents/about/welcome). Once there, select “Student Outreach & Support” and then “Notify Faculty of Absence”. As per new policy, you will be required to provide documentation when requesting absence notification. If your documentation or reason for absence is accepted by this office, they will in turn notify me. There are time limits to this process so, if you miss for any reason, be sure to submit a request in a timely fashion. UNDERSTAND, EVEN IF THE OFFICE APPROVES YOUR REQUEST, IT IS STILL AT THE DISCRETION OF THE FACULTY TO ACCEPT YOUR REQUEST FOR MAKE UP WORK. IF THIS OFFICE DOES NOT APPROVE YOUR REQUEST FOR NOTIFICATION, NO ACCOMMODATION WILL BE MADE.

Given that this is an online course, this attendance policy is pertinent for exam days. IF YOU MISS AN EXAM DUE TO ONE OF THE ABOVE - DESCRIBED CIRCUMSTANCES:

- **YOU MISS AN EXAM. YOU MUST SUBMIT A “NOTIFY FACULTY OF ABSENCE” request:**
  - Once I receive this notification, I will contact you regarding the possibility of a make – up.
  - When a make-up exam is warranted, it will be made available AT THE INSTRUCTOR’S EARLIEST CONVENIENCE. You will have a 24 hour window in which to complete the make-up exam.

- **With respect to Norton Homework Assignments – being absent on a due date IS NOT A VALID EXCUSE. Plan ahead and don’t procrastinate – they are open for several weeks. To be allowed to make up Norton homework, an excuse MUST cover the entire time period for which the assignments were open. Again, all requests such as this must be submitted via the “Notify Faculty of Absence” system.**

- **With acceptable excused absences, you will be permitted to make up a maximum of 15% of GRADED ASSIGNMENTS** (as per SFA policy). This equates to a total of (3) graded assignments (any combination of exams and / or homework assignments). Excuses for missed homework deadlines must account for the entire time the assignments were open. Missed work beyond this will be recorded as “0”s.

**E-mail Policy:**

I will be periodically communicating with you via e-mail. I use your OFFICIAL SFA E-MAIL ADDRESS FOR THIS PURPOSE. It is your responsibility to check your e-mail regularly and, if you have your SFA account forwarded to some secondary account, to be certain this is not full and can receive messages (the University policy regarding e-mail can be read [here](#)). As per the referenced SFA policy, D2L email IS NOT CONSIDERED OFFICIAL. If you wish me to see your email AND respond, DO NOT USE THE D2L e-mail function – ALWAYS USE YOUR OFFICIAL SFA address. As this is an online course, you will probably be communicating with me via e-mail. For efficient responses, please follow the “e-mail etiquette” suggestions below:

- **Include a subject line: Include your course number, section and reason for reaching out (for example, PSYC-2301-53240: Help with Assignment 3).**

- **Be courteous: Begin your email with a greeting that addresses your instructor respectfully and professionally, such as "Dear Mr. Smith" or "Hi Dr. Jones."
• Provide detail: Be specific about why you are reaching out and what you are having problems with. For example, “in section 6.1.2 Neurons, I'm not clear on...”. E-mail should be considered a professional form of communication – you should use proper grammar and spelling.

• Close with your full name: After your message, end with a closing and signature, such as "Sincerely, Jane Doe" or "Thanks, John Doe."

• A response may take time: I will try to get back quickly, but don’t expect a response within a few minutes. It can take up to 24 hours for an instructor to respond. If you need a response ON THE SAME DAY, your best option is to attend the virtual office hours on ZOOM. If e-mails arrive during office hours, I will do my best to answer them on the same day as well. For e-mails that arrive AFTER office hours, it may take 24 hours or more for a response; this is especially true if you send the e-mail in the evening, on weekends, or on a holiday. I do not check e-mail in the evenings, weekends, or on holidays.

SFA MANDATED SYLLABI STATEMENTS

Academic Integrity (4.1)

The Code of Student Conduct and Academic Integrity outlines the prohibited conduct by any student enrolled in a course at SFA. It is the responsibility of all members of all faculty, staff, and students to adhere to and uphold this policy.

Articles IV, VI, and VII of the new Code of Student Conduct and Academic Integrity outline the violations and procedures concerning academic conduct, including cheating, plagiarism, collusion, and misrepresentation. Cheating includes, but is not limited to: (1) Copying from the test paper (or other assignment) of another student, (2) Possession and/or use during a test of materials that are not authorized by the person giving the test, (3) Using, obtaining, or attempting to obtain by any means the whole or any part of a non-administered test, test key, homework solution, or computer program, or using a test that has been administered in prior classes or semesters without permission of the Faculty member, (4) Substituting for another person, or permitting another person to substitute for one’s self, to take a test, (5) Falsifying research data, laboratory reports, and/or other records or academic work offered for credit, (6) Using any sort of unauthorized resources or technology in completion of educational activities.

Plagiarism is the appropriation of material that is attributable in whole or in part to another source or the use of one’s own previous work in another context without citing that it was used previously, without any indication of the original source, including words, ideas, illustrations, structure, computer code, and other expression or media, and presenting that material as one’s own academic work being offered for credit or in conjunction with a program course or degree requirements.

Collusion is the unauthorized collaboration with another person in preparing academic assignments offered for credit or collaboration with another person to commit a violation of any provision of the rules on academic dishonesty, including disclosing and/or distributing the contents of an exam.

Misrepresentation is providing false grades or résumés; providing false or misleading information in an effort to receive a postponement or an extension on a test, quiz, or other assignment for the purpose of obtaining an academic or financial benefit for oneself or another individual or to injure another student academically or financially.

Withheld Grades Semester Grades Policy (5.5)

Ordinarily, at the discretion of the instructor of record and with the approval of the academic chair/director, a grade of WH will be assigned only if the student cannot complete the coursework because of unavoidable circumstances. Students must complete the work within one calendar year from the end of the semester in which they receive a WH, or the grade automatically becomes an F. If students register for the same course in future terms the WH will automatically become an F and will be counted as a repeated course to compute the grade point average. For additional information, go to https://www.sfasu.edu/policies/course-grades-5.5.pdf.
Students with Disabilities

To obtain disability-related accommodations, alternate formats, and/or auxiliary aids, students with disabilities must contact the Office of Disability Services (ODS), Human Services Building, and Room 325, 468-3004 / 468-1004 (TDD) as early as possible in the semester. Once verified, ODS will notify the course instructor and outline the accommodation and/or auxiliary aids to be provided. Failure to request services promptly may delay your accommodations. For additional information, go to http://www.sfasu.edu/disabilityservices/.

Student Wellness and Well-Being

SFA values students’ overall well-being, mental health and the role it plays in academic and overall student success. Students may experience stressors that can impact both their academic experience and their personal well-being. These may include academic pressure and challenges associated with relationships, emotional well-being, alcohol and other drugs, identities, finances, etc.

If you are experiencing concerns, seeking help, SFA provides a variety of resources to support students’ mental health and wellness. Many of these resources are free, and all of them are confidential.

On-campus Resources:

The Dean of Students Office (Rusk Building, 3rd floor lobby)
www.sfasu.edu/deanofstudents
936.468.7249
dos@sfasu.edu

SFA Human Services Counseling Clinic Human Services, Room 202
www.sfasu.edu/humanresources/139.asp
936.468.1041

The Health and Wellness Hub “The Hub”
Location: corner of E. College and Raguet St.

To support the health and well-being of every Lumberjack, the Health and Wellness Hub offers comprehensive services that treat the whole person – mind, body and spirit. Services include:

• Health Services
• Counseling Services
• Student Outreach and Support
• Food Pantry
• Wellness Coaching
• Alcohol and Other Drug Education
www.sfasu.edu/thehub
936.468.4008
thehub@sfasu.edu

Crisis Resources:

• Burke 24-hour crisis line: 1.800.392.8343
• National Suicide Crisis Prevention: 9-8-8
• Suicide Prevention Lifeline: 1.800.273.TALK (8255)
• johCrisis Text Line: Text HELLO to 741-741