

BOR 4303/INA 4305: Digital Footprints

Course Description/Overview

The purpose of this course is to explore the inner working of our digital world. Students will learn how Internet Protocol is used to provide a logical order to infinite navigational paths available via the web. Presenting a sense of order to what most find unimaginable in interpreting how addresses are designed. Terms related to internet technology and the dynamics of the internet are covered looking at the mechanism and tools used to breakdown user and server information to process the request for service into the smallest components using the addresses and net masks.

From the Course Catalog:

BOR4303 Digital Footprints (3.0): A digital footprint is the data users leave behind on digital services. This course explores the inner workings of our digital world. Students will learn about the two main classifications of digital footprints: passive and active. The course covers terms related to internet technology and the dynamics of the internet while examining the mechanism and tools used to breakdown user and server information.

Course Textbook

John K. Kowaski (2014), *IP Subnetting Made Easy* 4th Edition, (Self-Published) ISBN 978-1-61539-174-5

Prerequisites

Using online components for this courses, students must be able to operate a computer and have the necessary technical skills to navigate around a web page. Additional technical skills are not a prerequisite for this course, nor are any academic skills except the ability to communicate fluently in the English language.

Students can expect to spend about 6 hours each week doing outside readings and working exercises. The lessons will require reading the materials and watching or listening to media presentations.

Add/Drop Information

Click to see [ASU Academic Calendar](#)

Course objectives

As a result of completing this course, the student will be able to

- Define, discuss, identify and breakdown and Internet Protocol (IP) address into smallest parts as outlined in BOR4303 Digital Footprints.

Understand how their internet activities, including social media, increases their digital footprint.

- Identify the type, service provider and unique characteristics of their cellular devices.
- Improve student critical thinking and critical writing skills.

Grading Policies

This course employs writing assignments and scheduled class meetings activities to gauge student learning.

Assignment	Percent of Grade	Due
Lesson Quizzes	35%	Weekly
Classroom Attendance	20%	Weeks 1 - 8
Final Essay or Powerpoint	45%	Week 8

Angelo State University employs a letter grade system. Grades in this course are determined on a percentage scale:

- A = 90 – 100 %
- B = 80 – 89 %
- C = 70 – 79 %
- D = 60 – 69 %
- F = 59 % and below.

While I do not enforce a strict policy on grammar, I do reserve the right to stop reading your paper if spelling errors, sentence construction, or grammar is below the minimum expected for an undergraduate course. If I stop reading a particular paper, for reasons listed above, the paper or discussion thread will receive a failing grade.

The University policy on grades of "Incomplete" is that the deficiency in performance must be addressed satisfactorily by the end of the next long (16 week) semester or the grade automatically becomes an "F". Grades of "I" will only be awarded to students who have demonstrated sufficient progress to earn the opportunity to complete the course outside of the normal course duration. The award of an "Incomplete" will only be made in rare circumstances, with the concurrence of the student and the professor on what specific tasks remain and when they are due for the grade to be changed to a higher grade. The determination of the need to award an "Incomplete" is entirely up to the professor's personal judgment.

This course utilizes six (6) specifically dated quizzes and when the quizzes are made available they are **due by Sunday evening before 11:59 PM (CST) ending the week of notification**. There is a moderate amount of reading assigned that will drive student responses to understand and be able to answer the quiz questions and a writing assignment and the student should be prepared to spend upwards of six (6) hours each week on this course:

Weekly Quizzes

Each quiz is graded on a 100 point scale. After reading the weekly material, take the quiz and turn it in via Blackboard

Final Exam - Essay or PowerPoint

Writing Assignments

All writing assignments are expected to conform to a standard format and writing style. Text should be Times New Roman, 12 point font, with one-inch margins all around. Submitted papers will be double-spaced, have appropriate citations and a reference list where appropriate. Include a properly formatted reference list and cover page with every assignment. Written work will be graded by use of a [Writing Assignment Rubric](#).

Formal academic writing uses standardized styles and citation formats. The preferred format is the CHICAGO style. The Chicago Style guide can be found at <http://www.chicagomanualofstyle.org>. Papers should have 1-inch margins all around. You are expected to use a standardized font - preferably Times New Roman, 12 point. Cite your references in EVERY instance and include a properly formatted reference list and cover page with every assignment.

Every writing assignment should be submitted as a WORD document. If you do not have Microsoft Office, then copy the text you have written directly into the assignment section of Blackboard during the appropriate week. **Do NOT** submit writing assignments in Word Perfect, Microsoft Works, or some e-mail format. They will not be accepted.

For the purposes of this course, an abstract is not necessary on written assignments.

Rubrics

Writing assignments will be graded using a standardized rubric. It is recommended that you be familiar with these grading criteria and keep them in mind as you complete the writing assignments. There are two rubrics. Click the link to download the PDF document: [Writing Assignment Rubric](#)

PowerPoint

If you so choose, you may request to do a PowerPoint presentation as your final. The PowerPoint presentation will be no shorter than five (5) minutes in length not including questions. If you time your slide show prior to presentation, you will not have to worry about time.

Course Organization

Lesson 1: Defining Cyber Security: In this Lesson, we will cover some of the most basic concepts of

cyber security. Cyber security is vital in the era in which data regarding countless individuals and organizations is stored in a variety of computer systems, often not under our direct control. We will introduce Internet Protocol (IP) and talk about the both TCP and UDP, ports, protocols and definitions which should come in handy. Lastly, we will discuss the introduction of Internet Protocol version four (IPv4) and six (IPv6) and discuss some history of the Internet.

Lesson 2: The IP Address: In this Lesson, we will start discussing IP addressing, beginning with a definition, and discussing the makeup of these addresses. This is where many of you will get your first introduction of binary code. This is not a programming course. Understanding binary for IPv4 is critical to be able to break down an IP address into its smallest components. The powers of 2 will be explained in detail. Each Lesson builds on the previous Lesson, so don't skip any of these Lessons or chances are you'll be lost in the next Lesson.

Lesson 3: Classification of IP Address: This Lesson discusses the classes of IP addressing, how to identify each class and the size and scope of each class. There are five classes; we will only work with three for this course. Private IP addresses are discussed and how to find the detailed information on each of these classes. Lastly, we will discuss the mechanism needed for finding your IP address, and additional addresses used by your computer to communicate with the network.

Lesson 4: Subnet Masks: In this Lesson we will cover subnet masks, starting with natural or default subnet masks. Identification and breakdown of subnet masks in both binary and decimal, and how they're used.

Lesson 5: The ANDing Process: This Lesson is short, but critical. The skills used in this Lesson will pay dividends in Lesson 6. Understanding "ANDing" is essential to complete this course.

Lesson 6: Subnetting: This Lesson combines the previous five Lessons. It's where the "rubber meets the road", so to speak. Lesson six is Subnetting. We start by discussing which part of the IP address is used for network and which part is used for the host, how to break down the IP address and subnet mask to find the network address, the broadcast address and the usable IP addresses in any network. This Lesson works through a network of six subnets, giving the student an understanding of this critical process. The quiz for Lesson 6 isn't easy, but if you follow examples in this and previous Lessons, you shouldn't have a problem. Use your resources.

Lesson 7: Subnetting Wrap- This week we'll wrap-up the discussions we've had since week one. There is a no discussion question, or quiz. Get prepared for the final.

Final Essay (Week 8) The Digital Footprint: We discuss metadata, the information they contain. The required reading sets the student up for the final essay. Do not skip the required readings, they contain vital information.

University Policies

Academic Integrity

Angelo State University expects its students to maintain complete honesty and integrity in their academic pursuits. Students are responsible for understanding and complying with the university [Academic Honor Code](#) and the [ASU Student Handbook](#).

Accommodations for Disability

ASU is committed to the principle that no qualified individual with a disability shall, on the basis of disability, be

excluded from participation in or be denied the benefits of the services, programs or activities of the university, or be subjected to discrimination by the university, as provided by the Americans with Disabilities Act of 1990 (ADA), the Americans with Disabilities Act Amendments of 2008 (ADAAA), and subsequent legislation.

Student Affairs is the designated campus department charged with the responsibility of reviewing and authorizing requests for reasonable accommodations based on a disability, and it is the student's responsibility to initiate such a request by emailing studentservices@angelo.edu, or by contacting:

Office of Student Affairs
University Center, Suite 112
325-942-2047 Office
325-942-2211 FAX

Student absence for religious holidays

A student who intends to observe a religious holy day should make that intention known in writing to the instructor prior to the absence. A student who is absent from classes for the observance of a religious holy day shall be allowed to take an examination or complete an assignment scheduled for that day within a reasonable time after the absence.