

SYLLABUS
CIS 141 – 700
Fall 2022

(Reading Time: 13 minutes 28 seconds)

Course Description

CIS 141. ANALYTICS AND TECHNOLOGY. (3) An introduction to data analytics and the role of technology for everyday problem-solving. Practical experience with current and emerging technologies is provided.

Prerequisites

None.

Instructor

Dr. Mark Ciampa; #228 Grise Hall; mark.ciampa@wku.edu

I am a Professor of Computer Information Systems at Western Kentucky University in Bowling Green, Kentucky and hold a PhD from Indiana State University in Digital Communication Systems. Prior to this I was an Associate Professor and served as the Director of Academic Computing at Volunteer State Community College in Gallatin, Tennessee for 20 years. I have worked in the IT industry as a computer consultant for businesses, government agencies, and educational institutions. I have also written over 30 college technology textbooks, including *CompTIA CySA+ Guide to Cybersecurity Analyst 2e*, *CWNA Guide to Wireless LANs 3ed*, *Guide to Wireless Communications*, *Security+ Guide to Network Security Fundamentals 7e*, *Security Awareness: Applying Practical Security in Your World 5e*, and *Networking BASICS*.

Virtual Office Hours

For web courses I hold online virtual office hours through Zoom. My virtual office hours will be Monday 9:30 AM – 2:00 PM and Wednesday 1:00 PM – 4:00 PM. If you wish to meet with me, you must send to me an email message at least 24 hours in advance with the date and time you are requesting a meeting. If there is not a meeting already scheduled with another student, then I will send back to you a Zoom link for that meeting. If there is a conflict, I will alert you so that an alternative time can be arranged between us. If you instead need to meet with me in my office on campus, send to me an email and we will arrange a time during my regularly scheduled on campus office hours.

Colonnade Information

CIS 141 meets the requirements as a WKU Colonnade *Explorations* subcategory “Social and Behavioral Sciences” course. Colonnade *Explorations* courses are designed to help students learn how various forms of disciplinary knowledge can be applied to solve problems, to understand social interaction, and to interpret human experience through language and image. The “Social and Behavioral Sciences” subcategory courses are designed for students to explore the human experience using theories and

tools of the social and behavioral sciences. These courses require students to analyze problems and conceptualize the ways in which these theories and tools inform our understanding of the individual and society.

The Colonnade student learning outcomes are listed below. Upon successful completion of this course students should have demonstrated the ability to:

1. Discuss the use of technology in today's environment
2. Explain the functions of different types of technology and how they are used
3. Discuss the social and personal implications of the impact of technology
4. Demonstrate how to use basic features of productivity software tools
5. Discuss the necessary steps to secure a computer from attacks
6. Explain how data analytics is used today and demonstrate how data are used in data analytics

Course Goals

In order to be successful in both school and the workplace, it is important to have a broad understanding of how technology functions, the cybersecurity risks associated with using technology, and the social and personal implications of technology. It is also important to know about data analytics and how it is used today.

Course Learning Outcomes

Upon successful completion of this course students should have demonstrated the ability to:

1. Explain different cybersecurity risks
2. Demonstrate how to implement different cybersecurity tools
3. Discuss the social and personal implications of the impact of technology
4. Use productivity software tools to enhance written and oral communications
5. Define "data analytics" and demonstrate how data analytics tools can be used

Required Materials

1. TEXTBOOKS: Cengage MindTap for
 - Security Awareness: Applying Practical Security in Your World, 5e
 - Ethics in Information Technology, 6e
 - Business Analytics, 4e

NOTE: The Cengage MindTap platform and not just the textbooks are required for this course. The MindTap platform provides access to the textbook material and other digital content.

2. COMPUTER: Students will need access to a Windows or Apple computer with reliable Internet access and Microsoft Office 365 software installed (see "Computer Requirements" below)
3. OTHER: Students will need access to a smartphone on which you can install an app or a camera and microphone attached to a computer.

SAM Access Codes, which previously cost up to \$99, are now being provided to all students through their CIS course fee.

Big Red Backpack

The Big Red Backpack program is the title of WKU's partnership with Barnes & Noble College for their First Day Complete initiative. Big Red Backpack is a course materials delivery program that ensures students have their required course materials on the first day of class and may reduce the costs of materials for many of their courses. Enrollment in the program occurs automatically when students register for classes. Students may opt out of the program each semester, as long as they choose to opt out for all of their classes.

Students MUST carefully and completely follow all instructions regarding the Big Red Backpack Program. Those instructions will be provided by:

1. An email to all Topper email addresses from the Big Red Backpack Program one month prior to the start of classes.
2. The Big Red Backpack Program site: <https://www.wku.edu/bigredbackpack/>.

Students should refer to the Big Red Backpack Program site referenced above for opt-out deadlines and any additional details.

Computer Requirements

MICROSOFT OFFICE 365 DOES NOT RUN ON A CHROMEBOOK; CHROMEBOOKS CANNOT BE USED TO COMPLETE ALL ASSIGNMENTS IN THIS CLASS.

Students will need access to a Windows or Apple computer with reliable Internet access and Microsoft Office 365 software installed. This does not mean that students must own or purchase a computer, but they must have access to a computer with Microsoft Office 365. If a student is using their own computer, it must have Microsoft Office 365 installed (this software is available at no cost to WKU students at https://www.wku.edu/its/sms/microsoft_sa.php). If a student does not have a computer, they can use a computer on the WKU campus (all WKU computers have Microsoft Office 365 installed). A listing of the labs and times can be found at <https://www.wku.edu/its/labs/locations-hours/>

Activities

Below is a summary list of the course activities that students will perform. The detailed list of specific activities and due dates are contained in the document "Course Instructions and Activities." A brief explanation of the activity and any deliverable associated with it are as follows:

1. *Read Textbook Chapters and View Videos* - Students will read one textbook chapter each week. For each chapter there are also video presentations. **Deliverable:** None.
2. *Complete Assignments* – Each chapter will have assignments to complete. These assignments must meet a minimum word count and reading level. **Deliverable:** Students will complete and submit the required assignments online. The deadline for submitting the assignments is Saturday midnight of the week they are due; the exact dates are in the "Course Activities" document.
3. *Participate in Discussions* – Each week a different online discussion activity will be submitted that other students can also view. **Deliverable:** Students will submit the online activity as a Flip

video. The deadline for submitting the activities is Saturday midnight of the week they are due; the exact dates are in the “Course Activities” document.

4. *Take Chapter Quiz* – A quiz for each chapter will be given, and these are timed. **Deliverable:** Students will complete the exam online. The deadline for submitting the assignments is Saturday midnight of the week they are due; the exact dates are in the “Course Activities” document.
5. *Complete SAM Projects* - SAM projects offer a real-world approach to applying Microsoft Office skills using Word, Excel and PowerPoint. There are a total of 12 SAM projects. **Deliverable:** The deadline for submitting the SAM projects is Saturday midnight of the week they are due; the exact dates are in the “Course Activities” document.
6. *Complete Final Project* – There will be a Final Project to complete. **Deliverable:** The project must be submitted by the due date.

Students may discuss any aspect of a grade received for up to seven (7) calendar days after the grade is posted. After this deadline the grade can no longer be reviewed.

Deadlines: Textbook Activities and Exams

Assignments must be completed and turned in by the deadline of each Saturday at midnight. Students will be provided a grace period until Monday at 8:00 AM when assignments may be submitted without penalty. However, during the grace period the instructor will **not** answer any questions regarding assignments or assist students with any technology problems or Blackboard issues. **No assignments are accepted after Monday at 8:00 AM.**

Week	Material	Assignment Deadline
1	Chapter 1 Security Awareness	Saturday, Aug 27 @ 11:59 PM
2	Chapter 2 Security Awareness	Saturday, Sep 3 @ 11:59 PM
3	Chapter 3 Security Awareness	Saturday, Sep 10 @ 11:59 PM
4	Chapter 4 Security Awareness	Saturday, Sep 17 @ 11:59 PM
5	Chapter 1 Ethics in IT & SAM PowerPoint	Saturday, Sep 24 @ 11:59 PM
6	Chapter 5 Ethics in IT	Saturday, Oct 1 @ 11:59 PM
7	Chapter 8 Ethics in IT	Saturday, Oct 8 @ 11:59 PM
8	Chapter 10 Ethics in IT	Saturday, Oct 15 @ 11:59 PM
9	Chapter 1 Business Analytics & SAM Excel	Saturday, Oct 22 @ 11:59 PM
10	Chapter 2-A Business Analytics	Saturday, Oct 29 @ 11:59 PM
11	Chapter 2-B Business Analytics	Saturday, Nov 5 @ 11:59 PM
12	Chapter 3 Business Analytics	Saturday, Nov 12 @ 11:59 PM
13	Chapter 4 Business Analytics & SAM Word	Saturday, Nov 19 @ 11:59 PM
14	Chapter 5-A Business Analytics	Saturday, Nov 26 @ 11:59 PM
15	Chapter 5-B Business Analytics	Saturday, Dec 3 @ 11:59 PM
Final Exams	Final Project	Wednesday, Dec 7 @ 8:00 AM

A link to an online course calendar is on Blackboard under START HERE FIRST.

Points

Event	Points
Assignments : Hands-on Projects, Cases, What Would You Do, Analytics Projects (18 @ 20 points)	360
Discussions (14 @ 10 points)	140
Weekly Quizzes (14 @ 30 points)	420
SAM Projects (12 @ 16.5 points + 2 points)	200
Final Project	80
TOTAL	1,200

Grading Scale

Percentage	Total Points	Letter Grade
100%-90%	1,200-1,080	A
89%-80%	1,079-960	B
79%-70%	959-840	C
69%-60%	839-720	D
59%-0%	719-0	F

Grading Principles

1. Students will **not** be allowed to turn in assignments after the deadline has passed.
2. Students will **not** be allowed to “re-do” assignments after they have been graded.

Extra Credit

A “continuous extra credit” model will be used in this class instead of giving additional extra credit assignments. Students who turn in exceptional high-quality work on regular assignments may be awarded extra credit points.

Withdrawal Dates

- Aug 29 is the last day to withdraw from this class and receive both a “No Grade” and a 100% tuition refund.
- Oct 31 is the last day to withdraw from this class and receive a grade of “W.”

Email

Throughout the semester emails will be sent to the WKU email account of students. Students are responsible reading these messages. In order for student emails from this class to be filtered properly to receive top attention it is required that the subject line of emails is as follows: CIS 141 – Your Name

– Topic of Message (*CIS 141 – Pia Romanelli – Exam 2 Question*). Under normal circumstances students will receive a response no later than 24 hours after receiving your email IF it has this subject line; email messages without this subject line may be returned to the student or not be answered promptly.

Recordings

Recordings are for the purpose of educational use only. They are to be used exclusively by students who are officially enrolled in this class. These recordings are not to be shared with anyone outside of this class.

COVID-19

All students are strongly encouraged to [get the COVID-19 vaccine](#). In accordance with WKU policy, all students must call the WKU COVID-19 Assistance Line at 270-745-2019 within 4 hours of testing positive for COVID-19 or being identified as a close contact to someone who has tested positive. The COVID Assistance Line is available to answer questions regarding any COVID-19 related issue. This guidance is subject to change based on requirements set forth by federal, state, and local public health entities. Please refer to the Healthy on the Hill website for the most current information (www.wku.edu/healthyonthehill)

ADA Accommodations

In compliance with university policy, students with disabilities who require academic and/or auxiliary accommodations for this course must contact the Student Accessibility Resource Center located in Downing Student Union, Room 1074. The SARC can be reached by phone number at 270-745-5004 [270-745-3030 TTY] or via email at sarc.connect@wku.edu. Please DO NOT request accommodations directly from the professor or instructor without a faculty notification letter (FNL) from the Student Accessibility Resource Center.

Students with an FNL should NOT email the FNL to the instructor requesting a signature. Instead, students must first meet with the instructor during scheduled office hours to discuss how the accommodations requested will be served in this course.

The Blackboard Ally tool has been enabled within the Blackboard course site that allows you to have access to different formats of course files, including HTML, readable PDF, electronic braille, ePub, and audio (mp3). You may review the [Ally for Students video](#) regarding how to access these alternative formats.

Additional Assistance

- *Research Appointments with your Personal Librarian* - At WKU Libraries, a personal librarian is available for every program on campus, plus Special Collection librarians and archivists. Our goal is to save you time and help you be successful on term papers and research projects by showing you what you need to know to get started and be successful. Start your research by scheduling an appointment with your Personal Librarian (you can find them listed online [here](#)) through email or by calling (270)745-6125.

- *Writing Center Assistance:* The Writing Center on the Bowling Green campus will have writing tutors available to offer advice to current WKU students on any stage of their writing projects. In-person tutoring is available in Cherry Hall 123 from 10:00 AM to 4:00 PM Monday through Friday and in the Cravens Commons (at the horseshoe-shaped reference desk) from 5:00 PM to 9:00 PM on Sunday through Thursday evenings. Making appointments, as well as instructions and how-to videos are available through the [website](#). Walk-in feedback may be available, and students may also request feedback on their writing via email or arrange a real-time Zoom conference to discuss a paper. Students may also get short writing questions answered via email line sent to writingcenter@wku.edu by entering *Quick Question* in the subject line. The WKU START Centers will be offering writing tutoring sessions via Zoom as well as in person in their Glasgow and Elizabethtown locations. More information is available at [WKU Start Center](#).
- *WKU Counseling and Testing Center* - The university experience should be challenging, but not overwhelming. To this end, the WKU Counseling Center provides a variety of services to help strengthen students' capacity to tolerate distress, form healthy relationships, and seek healthy expressions of their ideals and values. If you would like to speak with someone, you may contact WKU's [Counseling and Testing Center](#) at 270-745-3159 or use their Here To Help service at <https://www.wku.edu/heretohelp/heretohelpemail.php>. If you need immediate help, please visit the Counseling Center in 409 Potter Hall or call the 24-hour emergency help line at 270-843-4357.
- *Mental Health Support Group* - A Free Support/Recovery Group for current WKU students struggling with anxiety, depression, or other mental health issues is available. This is an opportunity for students to support, connect with, and encourage others struggling with mental health issues and is led by two National Alliance on Mental Illness (NAMI) certified facilitators who are in mental health recovery themselves. This group has the support of the WKU Counseling and Testing Center and is a not a substitute (rather a supplement) for therapy or medication. No formal mental health diagnosis is required for students to attend. The group is sponsored by the NAMI-Bowling Green Chapter.
- *Peer Tutoring Services* - [The Learning Center \(TLC\)](#) provides free tutoring services helps students enhance their academic performance and sharpen their skills to be successful WKU University graduates.

Title IX /Discrimination & Harassment

Western Kentucky University (WKU) is committed to supporting faculty, staff and students by upholding WKU's [Sex and Gender-Based Discrimination, Harassment, and Retaliation](#) (#0.070) and [Discrimination and Harassment Policy](#) (#0.2040). Under these policies, discrimination, harassment and/or sexual misconduct based on sex/gender are prohibited. If you experience an incident of sex/gender-based discrimination, harassment and/or sexual misconduct, you are encouraged to report it to the Executive Director, Office of Institutional Equity/Title IX Coordinator, Ena Demir, 270-745-6867 or Title IX Investigators, Michael Crowe, 270-745-5429 or Joshua Hayes, 270-745-5121. Please note that while you may report an incident of sex/gender based discrimination, harassment and/or sexual misconduct to a faculty member, WKU faculty are "Responsible Employees" of the University and MUST report what you share to WKU's Title IX Coordinator or Title IX Investigator. If you would like to

Speak with someone who may be able to afford you confidentiality, you may contact WKU's [Counseling and Testing Center](#) at 270-745-3159.

Academic Dishonesty

"[Academic dishonesty] is a very serious academic offense. In a way, the very foundation of the American educational system rests on the issue of trust, and this trust depends on an honest exchange between students and their teachers. Just as students need to trust that teachers are honest about grading, teaching, and advising, teachers need to trust that students will be honest when taking tests and writing papers. Plagiarism, or any type of cheating, seriously undermines this foundation. This sort of dishonesty indicates that there may be serious questions about the offending student's ethics, and the stigma of this unethical behavior may follow the student for years—decreasing the student's chances of success in academic and professional work (adopted from Department of English Policy and Frequently Asked Questions on Plagiarism).

Students are expected to do work that is assigned to them and submit products that represent personal and individual effort **only**. This principle generally applies to all work done for a class, regardless of the nature of the assignment. When students breach this fundamental guideline, it can be safely assumed that academic dishonesty has occurred. Examples include:

1. In an exam setting
 - a. Presenting as your work test answers that are not your work, which includes i) Using resources other than those specifically allowed by the instructor (e.g., notes or another person); ii) Copying from another student's test; iii) Using notes from any source during a test when notes are not allowed; iv) Using materials that the instructor is not making available to the whole class; v) Recycling an assignment that has been used in another course
 - b. Acquiring a copy of the exam without permission
 - c. Providing answers for or soliciting answers from another student with or without permission of the other student
2. On a written assignment
 - a. Presenting as your own work duplicated work that you did not create by i) Purchasing written work from an external source; ii) Copying work from a free external source (online or otherwise); iii) Presenting as your work something another person has created
 - b. Altering text from another source or altering select words of some original text in order to conceal plagiarism
3. Other
 - a. Providing money or favors in order to gain academic advantage
 - b. Falsely stating that work was given to the instructor at a certain time when it was not
 - c. Correcting the responses of a graded assignment and presenting them to the instructor as incorrectly graded material
 - d. Pretending to be someone you are not; taking the place of another
 - e. Any other behavior that violates the basic principles of integrity and honesty

(Adopted from College of Education and Behavioral Sciences Academic Integrity Statement)

The WKU policy permits a faculty member to fail the student on the item on which academic dishonesty occurred or for the entire course. Cases of academic dishonesty will be handled as followed:

1. The student will receive a zero (0) for the assignment or an F for the course.
2. The incident will be reported to the CIS department chairperson.
3. The incident will be reported to the Dean of the College of Business.
4. The incident will be reported to the Office of Student Conduct. The student will notified of the violation and a disciplinary conference will be scheduled. At this meeting the Director will complete in the presence of the student the following forms: Judicial Process form, Disciplinary Outcome Conference form, and Parental Notifications and Creative Discipline Referral forms. Once the student accepts responsibility for violating university policies the sanction process begins to change the student's behavior and create a commitment to living within the standards of the Code of Conduct. In addition notifications will be sent to the appropriate stakeholders. A permanent reference to the incident may be placed on the student's permanent transcript.
5. Expulsion from the University may occur at the recommendation of the University Disciplinary Committee.

For this course academic dishonesty includes, but is not limited to, using any unapproved sources for completing an exam or sharing information or data files on a SAM Projects.

Regular and Substantive Interaction (RSI)

The U.S. Department of Education requires that distance education courses must include regular and substantive interaction between students and faculty. For more information about Regular and Substantive Interaction at WKU, please visit the [Regular and Substantive Interaction in Online and Distance Learning](#) webpage. In this course, regular and substantive interaction will take place in the following ways:

- Weekly announcements
- Hosting synchronous online meetings and chats that further explore course material and answer student questions (synchronous online chats will be available each Monday from 8:30 AM to 10:30 AM. Send an email to mark.ciampa@wku.edu and a chat link will then be returned to you)

Course Outline

UNIT A: Cybersecurity

1. Introduction to Security
2. Personal Security
3. Computer Security
4. Internet Security

UNIT B: Ethics

1. An Overview of Ethics

2. Freedom of Expression
3. The Impact of IT on Society
4. Ethics of IT Organizations

UNIT C: Data Analytics

1. Introduction
2. Descriptive Statistics
3. Data Visualization
4. Probability
5. Descriptive Data Mining