NORTH CAROLINA CENTRAL UNIVERSITY
FOUNDED 1910

H. M. MICHAUX JR. SCHOOL OF EDUCATION

EDGR 5910: Introduction to Statistical Methods in Education

Eagle Excellence
North Carolina Central University

INSTRUCTOR:	**James E. Osler II, Ed.D.**
CLASS TIME:	**Online**
CLASSROOM:	**Online**
INSTRUCTOR'S OFFICE:	**2098 School of Education**
INSTRUCTOR'S PHONE:	**(919) 530—7539**
INSTRUCTOR'S E–MAIL:	**josler@nccu.edu**
INSTRUCTOR'S OFF. HRS:	**M: 10:30—1:30, T: 10:30—1:30, W: 11:00—12:00, R: 10:30—1:30**
BANNER CRN:	**42061**
SECTION NUMBER:	**OL1**

DESCRIPTION

Introduction to Statistical Methods in Education is a graduate level course in applied statistics relevant to education and social sciences. The course topics will include descriptive statistics, inferential statistics, and analyzing as well as interpreting data. Candidates will learn scales of measurement, constructing frequency tables, measures of central tendency, variability, probability, and standard scores. Candidates will learn to design and interpret educational research by testing a hypothesis using correlation, t-tests, and chi-square. Data are analyzed using relevant statistical software and data analysis is described in a culminating paper.

ATTENDANCE

All courses will have attendance recorded digitally through the Blackboard course shell (provided online at the regularly scheduled time that the course will take place, this includes face to face and all online courses: taken through Blackboard Collaborate). If a candidate does not submit attendance online at the regularly scheduled time they will be considered absent. Check into the course shell regularly to be certain that you are current and remember to record your class attendance regularly.

SUPPORT

Student Disability Services

Students with disabilities (physical, learning, psychological, chronic medical, etc.) who would like to request accommodations and services are required to register with the Office of Student Disability Services (SDS) in Suite 120 in the Student Services Building. Please contact the SDS Staff at 919.530.6325 or email sds@nccu.edu. If you are NEW to SDS, please contact the office for an appointment. If you had accommodations previously, you can resubmit a request by visiting our website at www.nccu.edu/sds and clicking on the Accommodate Link. Students are expected to update their accommodations each semester, preferably during the first 2 weeks of each semester.

Student Support/Ombudsperson

The Student Ombudsperson is available to assist students in navigating unexpected life events, (e.g. short-term illness/injury, loss of a loved one, personal crises) and guide them to the appropriate University or community resources. Students may also receive assistance with resolving some emergency financial concerns, understanding NCCU policies or general problem-solving strategies. Schedule an appointment by contacting the Student Ombudsperson in the Office of the Dean of Students, G-06 Student Services Building, at 919.530.7492 or bsimmons@nccu.edu.

TEXT

Gravetter & Wallnau (2014). Essentials of Statistics for the Behavioral Sciences (8th Ed.), Belmont, CA: Wadsworth and Cengage Learning.

J. E. Osler (2012). Interactive Statistics Methods. (1st Ed.), Morrisville, NC: Lulu Inc.

MATERIALS

Candidates are required to have an External USB Drive with 100+ Gigabytes of memory to store and transfer data. USB Audio Headsets with a built in microphone is also required to create digital media and use Blackboard Collaborate software.

ACCREDITATION

The accrediting body for the School of Education is SACS (The Southern Association of Colleges and Schools). The SACS theme is as follows: "Higher Education in 2020: Emerging Trends in Pedagogy, Technology, and Student Learning".

PARAMETERS

The NCCU QEP: The QEP is the University Quality Enhancement Plan. Every college or university that is accredited by the Southern Association of Colleges and Schools (SACS) is required to have a QEP. NCCU's QEP theme is, "Communicating to Succeed." The goal of the QEP is to enhance students' skills in writing, speaking and using technology. Conceptual Framework & Vision Statement: "Preparing Educators for Diverse Cultural Contexts in the 21st Century" is the School of Education Conceptual Framework that under girds the instructor's commitment to prepare candidates to excel in variety of racial, cultural, and socio-economic environments. Candidates will gain the ability to see the social and political implications of their actions and the social contexts in which they are carried out. As a result, they will hone their skills and knowledge to promote greater equality, justice, and humane conditions in both educational settings and society abroad. "A Beacon for Educators in North Carolina and

Beyond" is the SOE Vision Statement. The Instructor's Educational Philosophy is as follows: "Through my Core Values of Honesty, Integrity, and Generosity; I as a Facilitator of Knowledge seek through communicative measures to transfer relevant: Knowledge, Skills, and Experiences to Candidates as they engage in Empowering Enriching Experiences." These Parameters are evidenced in the metrics found in the Measurement section of this syllabus.

OUTCOMES

After completing this course candidates should be able to: 1.) Describe the meaning of major statistical concepts both verbally and computationally; 2.) Compute frequencies, central tendency, variability, probability, z-score, t-tests (independent and dependent samples), correlation, and chi-square; 3.) Conduct a hypothesis test using appropriate statistical procedures and understand the limitations of significance testing; 4.) Design research studies using the t, r, and chi-square statistics; and 5.) Analyze data using software and make data based decisions.

Candidate Learning Outcomes

In this Course the Candidate will experience the following Eighteen Learning Outcomes:	
1.	Demonstrate ownership of current knowledge in their area of concentration by creating and organizing their course–based knowledge and experiences in a series of Experiential Learning Forms.
2.	Demonstrate the ability to think systematically about their practice and learn from experience by seeking the advice of others and draw on education research and scholarship to improve their practice.
3.	Function as members of learning communities: Contributing to the effectiveness of their profession by collaborating with other professionals and (when provided the opportunity) members of the community.
4.	Investigate current trends and issues in the discipline.
5.	Apply research findings to professional development to improve learning, instruction, and education.
6.	Build on their current knowledge and competencies by increasing their skills in data collection, planning, decision–making and evaluation.
7.	Apply research to real–world experiences to improve practice through action.
8.	Develop peer leadership and mentoring skills.
9.	Incorporate findings from educational literature into practice to improve learning.
10.	Engage in self–directed and self–reflective professional behavior and provide leadership to colleagues and communities through collaboration.
11.	Initiate professional inquiry through reading dialogue, development, and action research.
12.	When possible seek, evaluate, and apply well–grounded suggestions for improvement provided by educators, administrators, parents, students, industry, and community leaders.
13.	Participate in collaborative leadership and mentorship activities to address and solve problems.
14.	Create environments in which equity, fairness and diversity are modeled, taught, and practiced.
15.	Actively demonstrate and model the use of knowledge about cultural and socio–economic factors in planning instructional strategies and activities that connect the learner to the curriculum.
18.	Initiate (when possible) important activities to contribute to the profession such as mentoring, writing articles, drafting plans, serving on committees, seeking funding, addressing policies, and making presentations.

Educational Technology Expectations

Educational Technology Expectations [Extracted from the NC Instructional Technology Facilitator Standards]:
1. Leadership and Vision: **Educational technology candidates contribute to the shared vision for campus integration of technology and foster an environment and culture conducive to the realization of the vision.**
2. Technology Operations and Concepts: **Educational technology candidates demonstrate an in–depth knowledge of technology operations and concepts through presentations, discussions, products and essays to maximize student learning and professional practice.**
3. Planning and Designing Learning Environments and Experiences: **Educational technology candidates plan, design, and model effective learning environments and multiple experiences to promote a 21st century learning environment.**
4. Teaching, Learning, and the Curriculum: **Educational technology candidates create and evaluate curriculum plans that include methods and strategies for utilizing technology to maximize student learning**
5. Assessment and Evaluation: **Educational technology candidates apply and evaluate technology to facilitate a variety of effective assessment and evaluation strategies.**
6. Productivity and Professional Practice: **Educational technology candidates apply and evaluate technology to enhance and improve personal productivity and professional practice.**
7. Social, Ethical, Legal, and Human Issues: **Educational technology candidates demonstrate an in–depth knowledge of the social, ethical, legal, and human issues surrounding the use of technology in PK–12 schools and assist teachers in applying that understanding in their practice.**
8. Procedures, Policies, Planning, and Budgeting for Technology Environments: **Educational technology candidates plan, create, implement, and evaluate the development and implementation of technology infrastructure, procedures, policies, plans, and budgets for PK–12 schools.**
9. Global Education: **Educational technology candidates apply and evaluate technologies to enhance, improve and facilitate experiences to maximize global learning synchronously and asynchronously.**
10. Reflection on Practice: **Educational technology candidates actively reflect on their practice.**

Candidate Professional Development

Candidates will experience the following as they matriculate through this course: (1) Discovery via hands-on experiences; (2) Collaboration through active discourse; (3) Cultural Diversity via emphasis on a relevant student experiences; (4) Value of the subject matter in terms of their discipline; (5) Innovation through creative and critical thinking experiences; (6) Quality via rigorous thought-provoking assignments and course requirements; (7) Flexibility in "Authentic Tasks" that have viability beyond the learning environment; (8) Relevance as candidates focus on self-growth; (9) Cooperation through sharing, partnership, and teamwork; and (10) Ownership through locus of control.

Course Infrastructure

This course is organized in an online Blackboard 9.1 course shell according to a comprehensive "Instructional Operational Axiom" (or "IOA"). An IOA is a series of sequential rules presented as operational Levels that are each constructed according the "Essential IOA Equation": An Individual Instructional Operational Axiom Level is equal to Actions into Factors into Outcomes which is operationally defined as "$IOA_{LVL[1-4]}$ = The 4A Metric: Active ➡ Able ➡ Adept ➡ Apex in 4 Distinct Levels [1A through 4A] (Osler, 2010) described in the syllabus course schedule and measurement sections". Only after completing a specified level

is a candidate ready to move on to the next Level. The levels are sequential and are designed to move the degree seeking candidate from an amateur with the course content to a final level of expertise. This course has been redesigned and reorganized with the 4A Metric instructional methodology based upon past candidate input and overall success. The new course structure will aid all candidates in completing all required course assignments and tasks on time and in an organized fashion.

STANDARDS

This course uses the new distance education — Quality Matters™ standards to deliver information and content online as endorsed by SACS the primary University accrediting organization. Along with the Quality Matters™ Distance Education Standards the following additional Standards are aligned with and met in this course:

ISTE NATIONAL EDUCATIONAL TECHNOLOGY STANDARDS (NETS) AND PERFORMANCE INDICATORS FOR TEACHERS
I. TECHNOLOGY OPERATIONS AND CONCEPTS **Teachers demonstrate a sound understanding of technology operations and concepts. Teachers:** **A. Demonstrate introductory knowledge, skills, and understanding of concepts related to technology (as described in the ISTE National Educational Technology Standards for Students).** **B. Demonstrate continual growth in technology knowledge and skills to stay abreast of current and emerging technologies.**
II. PLANNING AND DESIGNING LEARNING ENVIRONMENTS AND EXPERIENCES **Teachers plan and design effective learning environments and experiences supported by technology. Teachers:** **A. Design developmentally appropriate learning opportunities that apply technology-enhanced instructional strategies to support the diverse needs of learners.** **B. Apply current research on teaching and learning with technology when planning learning environments and experiences.** **C. Identify and locate technology resources and evaluate them for accuracy and suitability.** **D. Plan for the management of technology resources within the context of learning activities.** **E. Plan strategies to manage student learning in a technology-enhanced environment.**
III. TEACHING, LEARNING, AND THE CURRICULUM **Teachers implement curriculum plans that include methods and strategies for applying technology to maximize student learning. Teachers:** **A. Facilitate technology-enhanced experiences that address content standards and student technology standards.** **B. Use technology to support learner-centered strategies that address the diverse needs of students.** **C. Apply technology to develop students' higher order skills and creativity.** **D. Manage student learning activities in a technology-enhanced environment.**
IV. ASSESSMENT AND EVALUATION **Teachers apply technology to facilitate a variety of effective assessment and evaluation strategies. Teachers:** **A. Apply technology in assessing student learning of subject matter using a variety of assessment techniques.** **B. Use technology resources to collect and analyze data, interpret results, and communicate findings to improve instructional practice and maximize student learning.** **C. Apply multiple methods of evaluation to determine students' appropriate use of technology resources for learning, communication, and productivity.**
V. PRODUCTIVITY AND PROFESSIONAL PRACTICE **Teachers use technology to enhance their productivity and professional practice. Teachers:** **A. Use technology resources to engage in ongoing professional development and lifelong learning.** **B. Continually evaluate and reflect on professional practice to make informed decisions regarding the use of technology in support of student learning.** **C. Apply technology to increase productivity.** **D. Use technology to communicate and collaborate with peers, parents, and the larger community in order to nurture student learning.**
VI. SOCIAL, ETHICAL, LEGAL, AND HUMAN ISSUES **Teachers understand the social, ethical, legal, and human issues surrounding the use of technology in PK-12 schools and apply that understanding in practice. Teachers:** **A. Model and teach legal and ethical practice related to technology use.** **B. Apply technology resources to enable and empower learners with diverse backgrounds, characteristics, and abilities.** **C. Identify and use technology resources that affirm diversity.** **D. Promote safe and healthy use of technology resources.** **E. Facilitate equitable access to technology resources for all students.**

INTERSTATE NEW TEACHER ASSESSMENT SUPPORT CONSORTIUM (INTASC) STANDARDS
STANDARD 1: **CONTENT PEDAGOGY** **The teacher understands the central concepts, tools of inquiry, and structures of the discipline he or she teaches and can create learning experiences that make these aspects of subject matter meaningful for students.**
STANDARD 2: **STUDENT DEVELOPMENT** **The teacher understands how children learn and develop, and can provide learning opportunities that support a child's intellectual, social, and personal development.**
STANDARD 3: **DIVERSE LEARNERS** **The teacher understands how students differ in their approaches to learning and creates instructional opportunities that are adapted to diverse learners.**
STANDARD 4: **MULTIPLE INSTRUCTIONAL STRATEGIES** **The teacher understands and uses a variety of instructional strategies to encourage student development of critical thinking, problem solving, and performance skills.**
STANDARD 5: **MOTIVATION AND MANAGEMENT** **The teacher uses an understanding of individual and group motivation and behavior to create a learning environment that encourages positive social interaction, active engagement in learning, and self-motivation.**
STANDARD 6: **COMMUNICATION AND TECHNOLOGY** **The teacher uses knowledge of effective verbal, nonverbal, and media communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom.**
STANDARD 7: **PLANNING** **The teacher plans instruction based upon knowledge of subject matter, students, the community, and curriculum goals.**
STANDARD 8: **ASSESSMENT** **The teacher understands and uses formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social, and physical development of the learner.**
STANDARD 9: **REFLECTIVE PRACTICE: PROFESSIONAL DEVELOPMENT** **The teacher is a reflective practitioner who continually evaluates the effects of his or her choices and actions on others and who actively seeks out opportunities to grow professionally.**
STANDARD 10: **SCHOOL AND COMMUNITY INVOLVEMENT** **The teacher fosters relationships with school colleagues, parents, and agencies in the larger community to support students' learning and well-being.**

COMMUNICATION

All degree seeking candidates are required to have a valid NCCU Email account. All class announcements, assignments, and messages will be mailed to this account via Blackboard.

MEASUREMENT

All assignments in this course are "Professional Development Tasks". These tasks are hands–on skill–based experiences that use technology to enhance candidate skills. All course outcomes will be evaluated according to the "*4*A Metric" (Osler, 2010) a comprehensive Professional Development Measurement System authored by the instructor and covered in detail the book, Infometrics: The Systemic Strategic Practice of Empowerment through the Creation of an Ideal Learning Environment via Optimal Instruction (Osler, 2010). The *4*A Metric is a comprehensive quantitative analysis methodology for the evaluation of candidate skills and growth based upon one of 4 distinct Professional Development Criterion (or "PDCs"). The PDCs are the reflective outcomes of evidence that clearly illustrate the precise professional level of candidate knowledge and skill. The Metric is designed to measure how well candidates have learned skills and are able to apply them at the most creative, reflective, and rigorous level. . The *4*A Metric and the method of measuring candidate outcomes are

covered in the following analytics (areas highlighted in gray indicate level of performance that should be the final candidate outcome when they complete the course):

THE *4*A METRIC: Measuring Content Authoring	
Professional Development Criterion Quantitative Levels:	**Professional Development Criterion Level Definitions**
***1*A = Active**	**A learner who has recently acquired the required skills, skill sets, and content knowledge; and uses them to create a product.**
***2*A = Able**	**A developing expert of required skills and content knowledge who is capable of applying concepts, methods, and techniques in a meaningful and effective product.**
***3*A = Adept**	**A content developer who creates and builds an original product that is extensible in multiple arenas and areas and fully expresses concepts, methods, and techniques.**
***4*A = Apex**	**An authoritative content producer who creates innovative and dynamic content in an original product as an expression of their unique voice and experiences that completely defines concepts, methods, and techniques.**

The *4*A Metric Performance Levels Defined by Hallmark Product Descriptions	
Professional Development Criterion Quantitative Levels:	**Professional Development Criterion Performance Levels: Candidate Hallmark Product Descriptors**
1 = Active	**Completed minimal course requirements.**
2 = Able	**Completed an Individually Titled Hallmark Product that is a Novel Property with Unique Characteristics.**
3 = Adept	**Completed an Individually Titled Hallmark Product that is a Novel Property with Unique Characteristics; and has a Distinctive Imprint tied to the Hallmark Product that can be replicated in the future and provide Content Ownership.**
4 = Apex	**Completed an Individually Titled Hallmark Product that is a Novel Property with Unique Characteristics; has a Brand tied to the Hallmark Product that can be replicated in the future and provide Content Ownership; and the Hallmark Product is lawfully protected by legal, proper, current Asset Security.**

The *4*A Metric Candidate Outcome Skill Sets and Growth by PDC Level			
Active = 1	**Able = 2**	**Adept = 3**	**Apex = 4**
Learning Skill Sets	**Learning Skill Sets through Artifact Production**	**Learning Skill Sets through Artifact Production coupled with a Distinctive Stylistic Imprint**	**Learning and Artifact Production coupled with a Distinctive Stylistic Imprint and an understanding and implementation of Asset Security**

The *4*A Metric Defining the PDC Level According to Level of Development		
Professional Development Criterion Quantitative Levels:	**Professional Development Criterion Level Descriptor Authoring Growth Models**	**Contextual Authoring Growth Definitions**
1 = Active	**Learner**	**Learning Skill Sets**
2 = Able	**Learner➡Planner**	**Learning Skill Sets evidenced in a Hallmark Authentic Artifact**
3 = Adept	**Learner➡Planner➡Developer**	**Learning Skill Sets evidenced in a Hallmark Authentic Artifact with a Distinctive Imprint**
4 = Apex	**Learner➡Planner➡Developer➡Creator**	**Learning Skill Sets evidenced in a Hallmark Authentic Artifact with a Distinctive Imprint and Asset Security**

The *4*A Metric PDC Level Descriptor Matrices		
Professional Development Criterion Quantitative Levels:	**Professional Development Criterion Level Descriptors**	**Professional Development Criterion Level Outcome Definitions**
1 = Active	**Learner**	**The term Active describes a beginner to a craft or discipline who with proper guidance can deliver professional level work that is recognized in clean, crisp, clear, and concise products.**
2 = Able	**Planner**	**The term Able describes a learner that has content knowledge and can apply that content knowledge to create a definitive professional Hallmark Product.**
3 = Adept	**Developer**	**The term Adept describes a content knowledge professional who can create a Hallmark Product with original content that disseminates information and ideas under a Distinctive Imprint.**
4 = Apex	**Creator**	**The term Author describes a learner who has cultivated and developed content knowledge and displays their knowledge through as evidence through the production of a distinctive and definitive Hallmark Product.**

The *4*A Metric PDC Level Hallmark Artifact Outcome Description Rubric		
Professional Development Criterion Quantitative Levels:	**Outcome Type**	**Professional Development Criterion Level Outcome Definitions**
1 = Active	**Learner**	**A clear, concise arrangement that has the highest value, illustrating a mastery of the craft through the application of content knowledge skill sets.**
2 = Able	**Planner**	**A clear, concise arrangement that has completely new, fresh, delivery of content and elements in dynamic and interesting ways illustrated in a summative outcome: the Hallmark Authentic Artifact.**
3 = Adept	**Developer**	**A clear, concise arrangement that has completely new, fresh, delivery of content and elements in dynamic and interesting ways**

The *4*A Metric PDC Level Hallmark Artifact Outcome Description Rubric		
		building upon original content using concepts, methods, and techniques. Illustrated in a summative outcome: the Distinctive Imprinting of the Hallmark Authentic Artifact.
4 = Apex	**Creator**	**An outcome that has clear, concise arrangement that has completely new, fresh, delivery of content and elements in dynamic and interesting ways building upon original content using concepts, methods, and techniques and breaks new ground in a manner that is inventive, inspirational, and pushes forward the body of knowledge as a problem–solving solution. Illustrated in the Asset Securing of the final completed Hallmark Authentic Artifact.**

The *4*A Metric PDC Level Outcome Skill Set Matrices		
Professional Development Criterion Quantitative Levels:	**Outcome Type**	**PDC LEVEL Outcome Examples**
1 = Active	**Learner**	**Uses newly acquired skill sets in traditional and dynamically bold ways—thoroughly explaining ideas, thoughts, and concepts; providing references where needed.**
2 = Able	**Planner**	**Uses skill sets in traditional and dynamically bold ways—thoroughly explaining ideas, thoughts, and concepts; providing references where needed. Enlightens the Target Audience by expounding upon existing information.**
3 = Adept	**Developer**	**Uses skill sets in traditional and dynamically bold ways—thoroughly explaining ideas, thoughts, and concepts; providing references where needed. Enlightens the Target Audience by expounding upon existing information. Uses graphics to tell a story that is relevant, specific, and compelling using content that is specific and engaging.**
4 = Apex	**Creator**	**Uses skill sets in traditional and dynamically bold ways—thoroughly explaining ideas, thoughts, and concepts; providing references where needed. Enlightens the Target Audience by expounding upon existing information. Uses graphics to tell a story that is relevant, specific, and compelling using content that is specific and engaging. Uses digital tools, metagraphics, and metametrics to address and solve a problem in inventive and innovative ways.**

THE *4*A METRIC: Measuring Content Authoring	
Professional Development Criterion Quantitative Levels:	**Professional Development Criterion Level Definitions**
***1*A = Active**	**A learner who has recently acquired the required skills, skill sets, and content knowledge; and uses them to create a product.**
***2*A = Able**	**A developing expert of required skills and content knowledge who is capable of applying concepts, methods, and techniques in a meaningful and effective product.**
***3*A = Adept**	**A content developer who creates and builds an original product that is extensible in multiple arenas and areas and fully expresses concepts, methods, and techniques.**
***4*A = Apex**	**An authoritative content producer who creates innovative and dynamic content in an original product as an expression of their unique voice and experiences that completely defines concepts, methods, and techniques.**

THE *4*A METRIC: The Four Levels of Authoring				
Professional Development Criterion Quantitative Levels:	**Level of *4*A Content Authoring**	**Author Definitions**	**Authoring Mechanisms**	**Definition of *4*A Content Level Authoring**
***1*A = Active**	**Author Level One**	**Activate**	**Active**	**The starting or basic level of content authorship.**
***2*A = Able**	**Author Level Two**	**Allocate**	**Action**	**The level of content authorship above basic level that is more advanced and indicates the ability to create novel and unique products.**
***3*A = Adept**	**Author Level Three**	**Articulate**	**Arrange**	**The level of content authorship above the second level that indicates the ability to create novel and unique products with distinctive characteristics.**
***4*A = Apex**	**Author Level Four**	**Authenticate**	**Allot**	**The highest level of content authorship indicating the ability to create novel and unique products with distinctive characteristics that illustrate the complete use of all relevant skillsets.**

E–PORTFOLIO

The *4*A Metric Interval schedule detailing the Candidate Virtual Locker Artifacts and Evidence Final and the Screenshots Integrated into the Final Comprehensive Presentation E–Portfolio according to the Interval Scales indicating the Overall Candidate Level of Performance:

The Interval Structure and Overall Final Grade Placement of All Virtual Locker and Final Independent Presentation E–Portfolio Scores by Number of Artifact Intervals							
E–Portfolio Grade Interval Eight: Preeminent = *4*A Metric Level: Apex [*4*A]	E–Portfolio Grade Interval Seven: Exemplary = *4*A Metric Level: Adept [*3*A]	E–Portfolio Grade Interval Six: Effective = *4*A Metric Level: Adept [*3*A]	E–Portfolio Grade Interval Five: Progressing = *4*A Metric Level: Able [*2*A]	E–Portfolio Grade Interval Four: Fundamental = *4*A Metric Level: Able [*2*A]	E–Portfolio Grade Interval Three: Impending = *4*A Metric Level: Active [*1*A]	E–Portfolio Grade Interval Two: Insufficient = *4*A Metric Level: Active [*1*A]	E–Portfolio Grade Interval One: Non–Existent = *4*A Metric Level: Active [*1*A]
*4*A Metric E–Portfolio Final Grade = "A"	*4*A Metric E–Portfolio Final Grade = "B"	*4*A Metric E–Portfolio Final Grade = "C"	*4*A Metric E–Portfolio Final Grade = "D"	*4*A Metric E–Portfolio Final Grade = "D"	*4*A Metric E–Portfolio Final Grade = "F"	*4*A Metric E–Portfolio Final Grade = "F"	*4*A Metric E–Portfolio Final Grade = "F"
Interval Number of E-Portfolio Artifacts = 57—64 ⬇	Interval Number of E-Portfolio Artifacts = 49—56 ⬇	Interval Number of E-Portfolio Artifacts = 41—48 ⬇	Interval Number of E-Portfolio Artifacts = 33—40 ⬇	Interval Number of E-Portfolio Artifacts = 25—32 ⬇	Interval Number of E-Portfolio Artifacts = 17—24 ⬇	Interval Number of E-Portfolio Artifacts = 9—16 ⬇	Interval Number of E-Portfolio Artifacts = 1—8 ⬇
57	***49***	***41***	***33***	***25***	***17***	***9***	***1***
58	***50***	***42***	***34***	***26***	***18***	***10***	***2***
59	***51***	***43***	***35***	***27***	***19***	***11***	***3***
60	***52***	***44***	***36***	***28***	***20***	***12***	***4***
61	***53***	***45***	***37***	***29***	***21***	***13***	***5***
62	***54***	***46***	***38***	***30***	***22***	***14***	***6***
63	***55***	***47***	***39***	***31***	***23***	***15***	***7***
64 Optimal Score	***56*** Superlative Score	***48*** Proficient Score	***40*** Efficient Score	***32*** Developing Score	***24*** Imminent Score	***16*** Initial Score	***8*** Non–Existent Score

In keeping with the North Carolina Central University policy on Academic Integrity found in the Academic Regulations manual, candidates are expected to be the sole contributor to work bearing their name, except where group projects have been assigned. All candidates are expected to follow the North Carolina Central University Academic Honor Code. No extra credit assignments are provided for this class. As future leaders in technology candidates are expected to be proactive in all matters related to their education. If difficulty occurs with any course materials or assignments, immediately request help or a conference in a timely manner. All Candidates will have an opportunity throughout the semester to improve their *4*A Metric evaluation on any given assignment by resubmitting the assignment at an appropriate time as specified by the instructor. Computation of the Final Grade = Delivery of the Final Course Project = 100% of the Final Semester Grade.

The following Traditional Final Grades will be given based upon the collective outcome of the PDCs. The Final Grade will be delivered via "Banner" the University academic registration and grading system. The Traditional Final Grades are as follows: A = Superior — Illustrating Work of Exemplary Quality; B = Satisfactory — Illustrating Work of Average Quality; C = Unsatisfactory — Illustrating Work of Poor Quality; F = Traditional Failure Grade; NW = A

withdrawal grade for non–attendance in a course; and NF = A withdrawal grade for non–attendance in a course, considered failing at the point of dismissal.

Late Assignments: Candidates may submit an assignment in a timely manner or redo an assignment to demonstrate their greater proficiency with that particular skill set. Due to the course infrastructure one cannot advance with completing initial prerequisite course material at all levels. Therefore, all candidates are encouraged to be both timely and proactive about their completion of assignments as they matriculate through the course.

INTEGRITY

In keeping with the North Carolina Central University policy on Academic Integrity found in the Academic Regulations manual, candidates are expected to be the sole contributor to work bearing their name, except where group projects have been assigned. All candidates are expected to follow the North Carolina Central University Academic Honor Code.

HELP

All candidates are expected to be proactive in all matters related to their education. If difficulty occurs with any course materials or assignments, immediately request help or schedule a conference with the instructor in a timely manner. No extra credit assignments are provided for this class.

RESOURCES

School of Education: 1st Floor resources include: Curriculum Materials Center and Student Lounge, 2nd Floor resources include: Virtual Imaging and Multimedia Lab and Student Resources Room; James Edward Shepard Library: Electronic Databases, Campus and Interlibrary Loan, Mega Computer Laboratory, Research Assistance and Tools, Catalog Search and Holdings, Electronic Books, Electronic Journals, and a Journal Finder; Online: NC LIVE, External Links in Blackboard (placed under the Links section in the Class Course Shell), Podcasts, http://ericir.syr.edu/ (The ERIC Database for refereed journals, texts, books, and articles), and http://www.psy.gla.ac.uk/~steve/summ.html (summative evaluation website)

SCHEDULE

COURSE SCHEDULE	
Weeks 1—4	**Weeks 1—4 = Level 1A: Active**
	Week 1 = Getting Started in Level 1A **Click on this folder to start Level 1A for this course and complete all of the materials within the folder. This will prepare you to get started in the course and introduce the full 4A Metric and how it will be used in this course.** **Week 1 = Level 1A: Active** **This folder contains the series of four Level 1A: Active "actions" that includes the first Textbook Chapter readings that must be first completed in preparation for the Level 1A: Able assignments that are the factors directly associated with this level.**
	Week 2 = Level 1A: Able **This folder contains the series of four Level 1A: Able factors that includes specific assigned exercises that must be completed in preparation for the Level 1A: Adept projects that are directly associated with this level.**
	Week 3 = Level 1A: Adept **This folder contains the series of four Level 1A: Adept projects that must be evaluated and completed in preparation for the Level 1A: Apex assessment outcomes that are directly associated with this level.**
	Week 4 = Level 1A: Apex **This folder contains the series of four Level 1A: Apex tests that must be completed at a Mastery Level to leave Level 1A: Apex and proceed forward to the next level: Level 2A.**

COURSE SCHEDULE	
Weeks 5—8	**Weeks 5—8 = Level 2A: Able**
	Week 5 = Getting Started in Level 2A **Click on this folder to start Level 2A for this course and complete all of the materials within the folder. This will prepare you to get started in the course and further propel you through the intricacies of the 4A Metric of which you re now very familiar.** **Week 5 = Level 2A: Active** **This folder contains the series of four Level 2A: Active "actions" that includes the next series of Textbook Chapter readings that must be first completed in preparation for the Level 2A: Able assignments that are the factors directly associated with this level.**
	Week 6 = Level 2A: Able **This folder contains the series of four Level 2A: Able factors that includes specific assigned exercises that must be completed in preparation for the Level 2A: Adept projects that are directly associated with this level.**
	Week 7 = Level 2A: Adept **This folder contains the series of four Level 2A: Adept projects that must be evaluated and completed in preparation for the Level 2A: Apex assessment outcomes that are directly associated with this level.**
	Week 8 = Level 2A: Apex **This folder contains the series of four Level 2A: Apex tests that must be completed at a Mastery Level to leave Level 2A: Apex and proceed forward to the next level: Level 3A.**
Weeks 9—12	**Weeks 9—12 = Level 3A: Adept**
	Week 9 = Getting Started in Level 3A **Click on this folder to start Level 3A for this course and complete all of the materials within the folder. This will prepare you to get started in the course and now begin your complete process of mastery of the 4A Metric and how it is directly applied via the relevant content of this course.** **Week 9 = Level 3A: Active** **This folder contains the series of four Level 3A: Active "actions" that includes a higher level of Textbook Chapter readings that must be first completed in preparation for the Level 3A: Able assignments that are the factors directly associated with this level.**
	Week 10 = Level 3A: Able **This folder contains the series of four Level 3A: Able factors that includes specific assigned exercises that must be completed in preparation for the Level 3A: Adept projects that are directly associated with this level.**
	Week 11 = Level 3A: Adept **This folder contains the series of four Level 3A: Adept projects that must be evaluated and completed in preparation for the Level 3A: Apex assessment outcomes that are directly associated with this level.**
	Week 12 = Level 3A: Apex **This folder contains the series of four Level 3A: Apex tests that must be completed at a Mastery Level to leave Level 3A: Apex and proceed forward to the next level: Level 4A.**
Weeks 13—16	**Weeks 13—16 = Level 4A: Apex**
	Week 13 = Getting Started in Level 4A **Click on this folder to start Level 4A for this course and complete all of the materials within the folder. At this point you have fully mastered the 4A Metric and how it was used in this course. Your content mastery should be demonstrated through your completed course work.** **Week 13 = Level 4A: Active** **This folder contains the final series of four Level 4A: Active "actions" that includes your final Textbook Chapter readings that must be first completed in preparation for the Level 4A: Able (at completion thereby demonstrating complete mastery of all 4A Metric Active Levels for this course).**
	Week 14 = Level 4A: Able **This folder contains the final series of four Level 4A: Able factors that includes specific assigned exercises that must be completed in preparation for the Level 4A: Adept projects that are directly associated with this level (at completion thereby demonstrating complete mastery of all 4A Metric Able Levels for this course).**
	Week 15 = Level 4A: Adept **This folder contains the final series of four Level 4A: Adept projects that must be evaluated and completed in preparation for the Level 4A: Apex assessment outcomes that are directly associated with this level (at completion thereby demonstrating complete mastery of all 4A Metric Adept Levels for this course).**
	Week 16 = Level 4A: Apex **This folder contains the final series of four Level 4A: Apex tests that must be completed at a Mastery Level to leave Level 4A: Apex and thereby fully complete this course.**