University of Advancing Technology
Learn. Experience. Innovate.

ONLINE

CATALOG 2013-2015

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An Arizona corporation established in 1983, University of Advancing Technology (UAT) is a registered tradename of University of Advancing Computer Technology, Inc.

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UAT is accredited by The Higher Learning Commission and a Member of the North Central Association. Further information about The Higher Learning Commission may be obtained via **www.ncahlc.org** or by phone: (800) 621-7440 / (312) 263-0456.

In addition, UAT holds the following accreditations, authorizations, approvals and memberships:

- Council for Higher Education Accreditation (CHEA), Accreditation Member
- Licensed by the Arizona State Board for Private Postsecondary Education
- Certified by the US Department of Education
- Designated Center of Academic Excellence by the National Centers of Information Assurance Education (CAE/IAE) sponsored by the U.S. National Security Agency and the Homeland Security Department
- Network Security curriculum certified by the US National Security Agency's Information Assurance Courseware Evaluation program for NSTISSI-4011, National Training Standard for Information Systems Security (INFOSEC) Professionals; CNSSI-4012, National Information Assurance Training Standard for Senior Systems Managers (SSM); NSTISSI-4013, National Information Assurance Training Standard for System Administrators (SA); and NSTISSI-4014, Information Assurance Training Standard for Information Systems Security Officers (ISSO)
- Programs approved for the training of veterans
- Approved by the Student and Exchange Visitor Information Systems SEVIS) for training of foreign students
- Alpha Beta Kappa Honor Society
- Association of Computing Machinery (ACM), Member
- American Association of Collegiate Registrars and Admissions Officers (AACRAO), Member
- Western Association of Student Employment Administrators, Member
- Arizona Veterans Association, Member
- Better Business Bureau, Member
- National Association of Student Financial Aid Administrators (NASFAA), Member
- NAFSA: Association of International Educators, Member
- Cumulus, the International Association of Universities and Colleges of Art, Design and Media; Member

To view an updated list, go to www.uat.edu/accreditation. The major certificates of accreditation or membership are on display in the halls of the school. Those which are not on display may be viewed by directing a written request to the appropriate school official.

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WELCOME
STUDENTS

WELCOME STUDENTS!

Since its beginning, University of Advancing Technology has been involved with innovative approaches to technology education, fostering an environment of creative ingenuity. It is an atmosphere where students feel comfortable with the faculty, connected to their studies and share the same passions for new thinking as their peers.

UAT is a niche university—it is not for everyone. It is a technology nexus, a collection of technophiles, tech geeks and mavens of the digital world. UAT students are naturally unique and create unique things. The University boasts top-level cyber security graduates, a truly advancing computer science curriculum, and a broad sweep of game development programs.

UAT recognizes that the modern college student is different than previous college students; today's college students approach learning with a value set that emerged from experiences including exposure to technology and a myriad of environments at a very young age. We see technology as digital information and visual tools that have profoundly altered how we work, play, live and interact with each other. At the same time, as technologists, we see that there will always be new tools created to address mankind's emergent needs and desires. Researchers and experts in technology universally acknowledge that one of the great challenges to be faced in our future is the ability to make good use of these tools. Humanity finds itself in need of innovative thinkers who can be presented with creative design problems possessing parameters that are new and push the limits of expertise. These technologists will be tasked with finding new information from sources, both electronic and human, and bringing them together in a way that results in the creation of something new and useful; something capable of capturing our imagination in exciting ways.

Education at UAT is intentionally molded to teach students how to think as technologists. Solutions to future technology challenges will be inventive and on the cutting edge of knowledge creation; therefore, our approach to learning will teach you how to think in both linear and lateral ways. This environment not only supports curricular endeavors but also develops the whole person through social, emotional and physical outlets, thus preparing you for a life of contributions within society. The journey ahead of you will be unlike any you have encountered before and will be unlike any you will experience later. Our intent is to make this time in your life thought-provoking, challenging and engaging—ultimately, it will be a time of successful transformation and growth.

There are clear points where the choices we make profoundly affect the direction that our lives subsequently take. These are moments when our decisions create ripples that will carry us forward for years to come and produce results that shape who we are and what we are proud of. For the student who possesses a passion for technology, I believe that you will find UAT to be a defining choice as you get ready to enter this profound field.

As you explore UAT, through the online world and on campus, you'll discover groups of students working together on various technology innovations, tracking down the next breakthrough. These interactions will not only challenge you to learn from each other, but will also build friendships and partnerships that will last a lifetime. It is with this frame of mind that I welcome you to University of Advancing Technology, a unique place where the culture of technology is understood and made relevant to the world around us. It is a world where you will feel that you belong and are a part of something exceptional.

Welcome to the UAT Community!

Jason Pistillo
President

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UAT OVERVIEW

MISSION

To educate students in advancing technology who innovate for our future.

VISION

To advance global society by developing premier thinkers for a lifetime of innovation.

INSTITUTIONAL VALUES

Integrity—We promote positive social responsibility and good global citizenship, and always act with integrity, honesty and ethics above reproach.

Quality Through Continuous Improvement—UAT is a complex system of interrelated parts that shall be continuously improved. We plan, use feedback and seek to understand relationships so that UAT systems will be stopped, simplified, improved or innovated.

Lifelong Learning—UAT is a learning organization. UAT provides the highest level of student learning, seeks learning opportunities throughout the organization and expects individual growth.

Teamwork—We believe in and foster teamwork. Working in collaborative teams, we support each other, create alignment and build shared understanding that produces superior results.

Family—UAT values the commitment, support and lifelong growth that come from a learning community built around family principles. Its policies and practices promote healthy interactions within this family context. UAT embraces the benefits of family working at and attending the university.

DIVERSITY

At UAT, we believe modern technology is the amalgam of innovations from worldwide contributors. This stimulates the University to invest significant energy in teaching an understanding of others and an appreciation of the benefits and leverage that exist within our differences. These differences include those of background, perspective, thinking style, learning style and personality. Further, the University believes that diversity in technology education requires educating and empowering students to serve the common good with success and distinction in an increasingly global environment while understanding the profound impacts of the technologies they may develop. To encourage this appreciation, UAT provides a diverse set of learning experiences and campus activities including curricular and extracurricular interactions that foster an understanding and appreciation of the diversity of individuals and teams within a broad context. All endeavors are focused on this global context, creating competencies in inquiry, open dialogue, communication and intelligent choice-making.

ABOUT UAT

University of Advancing Technology is a private college that merges the values of the traditional academy with the modern technology campus—a geek-friendly community uniquely suited to provide student passionate about technology an ideal place to live and grow. Dedicated to advancing technology both in practice and in theory, we serve our student body by fostering knowledge creation and academic excellence in an environment that embraces the richness and diversity of modern technology. We teach students how technology has shaped the world so that they may be part of its evolution. We believe that the complex relationship between knowledge and technological innovation will create a better world. Because of UAT's dedication to both scholastic excellence and technological innovation, it stands apart in academia as an ideal destination for the technophiles of the world, a place in which students learn to value their own uniqueness and the power of technology in education.

At the heart of UAT's curricula is a technology-infused campus in Tempe, Arizona. Learning at UAT extends from out students, staff and faculty to the institution itself. We've devoted our resources to creating a unique academic environment where students are challenged to achieve, explore new and traditional concepts, and practice what they learn in real-world situations. This combination of research, scholarship and application creates technically adept graduates who are equally at home in academia and the working world, and who are valued by both.

OFFERINGS

University of Advancing Technology delivers collegiate education and research in a multitude of technology areas. UAT offers two-year, four-year and graduate degree programs in a year-round environment in arts and sciences. These programs result in associate's, bachelor's or master's degrees. UAT offers the following degree programs online:

Bachelor or Associate of Science degrees are offered in the following disciplines:

- Advancing Computer Science
- Game Programming
- Network Security
- Technology Forensics
- Web Design

Bachelor or Associate of Arts degrees are offered in the following disciplines:

- Game Art and Animation
- Game Design
- Virtual Modeling and Design

Additional degree programs are offered on campus. See www.uat.edu for additional information.

A program is defined as a licensed and accredited degree program. Programs are designed to provide a balance of computer technologies, conceptual knowledge and general education. The University utilizes feedback from industry, employers, graduates, students and faculty when designing curriculum to ensure that the programs reflect industry advancements, needs and requirements in a competitive world economy.

HISTORY

>1983	College founded.
>1987	First accredited by ACCET.
>1992	Converted to accreditation by ACICS.
	First in the nation to offer online training for AutoCAD.

First Bachelor's degree program founded.
Virtual Reality program offered.
Center for Learning Research center founded.

>1994 UAT Intranet created.

>1998 Tempe campus opened.

>1999 Accredited by ACICS to offer graduate degrees.

>2000 Began seeking regional accreditation.

>2002 Changed name to University of Advancing Technology.

>2003 First online Bachelor's degree in Game Design offered by UAT.

>2005 Leonardo da Vinci Society for the Study of Thinking created with Edward de Bono as chair.

>2006 Margaret Wheatley inducted into Da Vinci Society.
Construction begins on Founder's Hall.

>2007 Founder's Hall opened.
Fritjof Capra inducted into Da Vinci Society.
Designated a Center of Academic Excellence.
Designated a Candidate with the Higher Learning Commission and an affiliate of the North Central Association.
Designated as a Center of Academic Excellence (CAE) in Information Assurance by the National Security Agency (NSA) and the Department of Homeland Security (DHS).

>2008 Michio Kaku inducted into Da Vinci Society.
Received Department of Defense grant to create classroom.
Student Innovation Project (SIP) added as graduation requirement.

>2009 Accredited by The Higher Learning Commission and a member of the North Central Association. (www.ncahlc.org)
Ray Kurzweil inducted into Da Vinci Society.

>2010 Lynn Margulis inducted into Da Vinci Society.
Cyber Security classroom opened.

>2011 Dr. Edgar Mitchell inducted into Da Vinci Society.

>2013 Dr. Garrett Lisi inducted into Da Vinci Society.
UAT celebrates 30th anniversary.
Digital Maker Fab Lab opens.

When University of Advancing Technology was founded in 1983, it was conceived as a small school focused on training engineers and architects in a completely new field of computer-aided engineering. In the '80s, UAT spent its time forming as an institution. Its original students came to the CAD Institute seeking professional development training and certifications.

From its beginning, the institution was involved with advances in computer graphics and unique approaches to technology education. By 1990, students could specialize in Virtual Reality. In 1992, CAD Institute founded an initial research center, the Computer Reality Center. The center performed research for the computer graphics industry primarily, with specific emphasis on the field of virtual reality.

The center's mission changed in 1995 from applied research to leveraging technology for learning. Over time, the center adopted the Hyperlearning learning model and developed the methods associated with Synchronic Learning.

To strengthen its program offerings, the University sought to attain vital accreditations which would raise it from a certificate-granting body to an institution of higher learning—a college—offering nationally accredited associate's and bachelor's degrees in 1992. At this point, the University's founders recognized that specialized technologies programs filled a gap in higher education for students seeking technology-intensive programs, but who did not want to attend a "tech school." In order to attract this type of student, CAD Institute changed its name to University of Advancing Computer Technology in 1997.

Inherent in this name change was the desire to reflect the broad technology focus of students within a collegiate setting. Associated with the growth in programs and the student body, the institution designed and built a new campus. Its architecture was a reflection of the school's learning methods and showcased the technology foundational to its programs.

Construction of the campus was completed in the spring of 1998, operating in a technology-oriented 50,000-square-foot campus in Tempe, Arizona, centrally located to metropolitan Phoenix. The building features classrooms, computer labs, innovating studios, and computing commons outfitted with approximately 300 computer workstations and an extensive technology infrastructure.

Student and faculty learning and resource areas are designed to foster working in collegial groups, providing flexibility and much needed access to technology. Food services, library and student commons social areas enhance student life and collaborative learning.

Throughout 2000 to 2010, UAT worked to remove barriers to create a college that absolutely demonstrated what being a private college was really all about. A traditional acceptance model was formed and there was an increase in rigor, general studies and academic content in the majors.

Recognizing that technology is not exclusive to computers, the institution made the next incremental change in its name in 2002, when it became University of Advancing Technology (UAT). The University removed the word "computer" from its name as a reflection of the notion that "computer technology" had evolved beyond the personal computer to encompass all devices that communicate, manage information and provide connections through all media, including the Internet.

In the Fall of 2007, housing facilities for 260 students were opened on campus. That same year, UAT became a candidate with the Higher Learning Commission and an affiliate of the North Central Association. In recognition of the quality of its Network Security program, the University was also designated a Center of Academic Excellence by the National Centers of Information Assurance Education (CAE/IAE) sponsored by the U.S. National Security Agency and the Department of Homeland Security.

Student Innovation Projects (SIPs), originally termed Senior Innovation Project, began taking shape in 2008. Students begin evolving an idea in their freshman year that aims to develop tomorrow's innovative technologies.

In 2009, UAT became accredited by The Higher Learning Commission and a member of the North Central Association (www.ncahlc.com) to award diplomas, associate's degrees, bachelor's degrees and master's degrees. The 2009 year also included the addition of four new degrees. 2013 marks UAT's 30th Anniversary as an institution of higher education.

STUDENT LIFE

At UAT, there is no gap between a traditional, well-rounded education and modern technology. Because of this, the student culture at UAT is unique among contemporary colleges. UAT students are expected to develop and share their passions and intellectual pursuits in all aspects of college life. In this environment, academics thrive and students are supported in all of their endeavors by faculty and staff who are as excited about discovery as they are about teaching.

UAT strongly supports the continuation of a rich student life experience through many channels, such as:

- 48 hour challenges in game, film, robotics and programming.
- Student Clubs and Organizations: a truly geek-friendly environment, UAT supports a multitude of clubs and campus activities, such as Anime Club and Japanese Club.
- Technology Forum: UAT hosts this semi-annual industry/student focused event to bring students together with a diverse array of the best and brightest in every conceivable technology field.
- Student Trips: major industry trade shows and academic conferences regularly attended by students include DEF CON, SIGGRAPH, Game Developers Conference, COMICON, and Black Hat.

In addition, University Student Government (USG)—formed to give the student body at UAT a collective voice and to set traditions within the University—performs important roles in encouraging self-directed Student Life organizations, coordinating student community service activities and providing a venue for feedback between students, faculty and staff. Students are encouraged to participate in USG's weekly open meetings.


ACADEMIC
AT UAT

ACADEMICS

Academics at UAT focus on creating an immersive technology education experience that integrates the classroom experience with asynchronous and online learning elements.

As a small private college that focuses solely on advancing and emerging technology disciplines, UAT programs tend to be unique among academia or emerge years ahead of other schools. The emerging technologies that resonate with UAT's identity are identified using a research process that incorporates global perspectives on technologies that will contribute to the development of human society. The study and furtherance of those technologies are developed into undergraduate and graduate programs through a balanced process incorporating insights from many sources. The resulting curriculum is delivered using methodologies specifically chosen for their effectiveness in educating the current college student, i.e., the digital native.

Delivery of the programs is conducted by highly credentialed, experienced, engaged, passionate faculty members. Additionally, delivery of the programs is thoroughly supported by a technology implementation component that continuously ensures UAT students have access to some of the most advanced technologies available with respect to their disciplines.

The ultimate goal of the academic programs is to support the fulfillment of UAT's mission to "educate students in advancing technology who innovate for our future." In pursuit of fulfilling our mission, each of the above components can be expounded upon as follows:

All programs at UAT are identified through a process that examines emerging technologies in their infancy and gauges their potential to contribute and change the way we live and interact. Technologies that align with UAT's identity and have the potential to contribute long-term to society are chosen for research and possible implementation within the University's academic environment. Those technologies that are determined to be viable for development into meaningful, rich academic degree programs are then readied for implementation. During this development phase, members of UAT's academic administration staff seek to recruit instructors and subject matter experts who demonstrate appropriate expertise in the emerging technology area to develop such programs at UAT. Programs are then developed by these faculty members and curriculum specialists using a balanced approach to leveraging input from industry, alumni, students, employers and the broader community.

FACULTY

UAT's faculty body is a diverse, collaborative and deeply connected community of thinkers, teachers, technological gurus, industry experts and mentors. They garner their skills, knowledge and expertise from a range of experiences within academia and industry. UAT faculty members are governed by their passions for technology, their students and their own academic and professional growth. Because technology is constantly evolving, UAT instructors continually work to identify and forecast technological developments. They routinely engage and assess developments within their respective disciplines, testing new software, evaluating new strategies and analyzing and integrating new industry standards and protocols. However, beyond simply engaging the skills and tools of their disciplines, our faculty members maintain awareness of the theoretical and abstract approaches that inform those skills and tools.

UAT instructors are educators above all else. Their degrees and formal credentials reflect their passion for learning. As lifelong learners, they are vigilant of recent developments in teaching pedagogy, methodology and cognitive development. They are continually reaching to achieve more effective results through careful attention to assignments, outcomes, in-class activities and student needs. UAT's unique approach to teaching and learning—as articulated in the Synchronic Learning methodology—weaves the study of best practices in teaching and learning into every facet of the institution, from the building's architecture to the programs' course offerings. UAT faculty members are also acutely aware of technology as a powerful learning tool, adopting pedagogical approaches that capitalize on students' status as digital natives. UAT faculty are the most profound embodiment of Synchronic Learning—they are adept at utilizing multiple student-centered approaches to teaching in order to instill in their students an awareness of theory, applied skills and, ultimately, knowledge synthesis.

We believe that the best educators are more than teachers—they are mentors. Mentors are concerned with more than the technical expertise of their students; therefore, they give generously of their time and knowledge, and condition their educational approach to addressing the complete person. As mentors, they are personally invested in the successes and failures of every student. In doing so, they hold students to high academic and personal standards because they understand the expectations that await college graduates beyond the limited purview of academia. The success of faculty is gauged by the success of their students in completing innovative technology works.

As educators and mentors, it is also the responsibility of faculty members to function as ambassadors to the current physical, digital and increasingly global communities and contexts that impact their disciplines. This means that faculty members move in circles outside of the insular borders of single industries and disciplines. Faculty members are critically aware of how their efforts within their disciplines impact the industries and communities associated with their work. They attend and speak at large conferences, they maintain professional memberships and certifications, and they read and submit articles to trade publications, magazines and academic journals. This community consciousness ensures that UAT students graduate with a critical awareness that grants them efficacy as digital citizens.

UAT faculty members also share a commitment to the University, organizing and shaping it through service. They are respectful colleagues, willing to collaborate with others and use different opinions to form complex solutions. This sense of camaraderie among faculty members contributes to easier collaboration and a generative environment. By serving on committees and participating in program governance, faculty members give voice to their discipline and help determine its future. Additionally, faculty members leverage their industry experience in order to meaningfully develop UAT's academic curriculum. They are active in University and student culture, participating in events such as CONNECT (the new student orientation), UAT Discovery Expo (open house event) and Technology Forum (industry experts come to campus for lectures, workshops and networking). Such dedicated service creates a rich and passionate environment in which to learn and to work.

SYNCHRONIC LEARNING

Synchronic Learning is a hands-on, real-world experience allowing individual students and multidisciplinary teams to work side-by-side with professors and industry leaders to create innovative, complex projects. There are four cornerstones of Synchronic Learning – The UAT Experience, Delivery Methods,

Tiered Curriculum and Dynamic Learning. To view this interactively online, visit **www.uat.edu/synchroniclearning**.

UAT has spent years developing, implementing, evaluating and improving its signature pedagogy for technology students. Delivery methods focus on creating active lifelong learners, thinkers and innovators using metacognitive strategies appropriate to the technology environment, and tailoring experiences to today's learners. Through the course of the 1990s, the University's Center for Learning Research studied and published best learning practices. Renamed the Center for Learning Excellence (CLE) in 2002, the center was given a charter to develop learning practices and ensure faculty became master practitioners. From this research the University reviews, updates and enhances our delivery model on a regular basis. This approach ensures that our methods keep pace with the unique and changing nature of the disciplines we deliver. We consider this ongoing improvement necessary to maintain the relevance of our methods and curricula.

THE UAT EXPERIENCE

The quintessential environment for learning is one in which students feel comfortable expressing their individual thoughts, while being challenged by other technophiles, professors and industry leaders. On campus, online and at leading industry events, it's this UAT experience, coupled with a full immersion in technology that promotes the maximum development of each student's potential.

DELIVERY METHODS

A combination of synchronous and asynchronous content delivery methods integrates technology into educational experiences and encourages the development of lifelong learning habits. UAT understands that all students learn differently, but more importantly, that successful individuals will need the ability to adapt and learn in different ways. Our five delivery methods—or facets of Synchronic Learning—are designed to address all learning styles and prepare students to engage in a lifetime of learning after leaving the University.

The nature of technology is change. Therefore UAT continuously looks for additional best practices in modern learning that could be applicable and provide improvements to this system. With the practicing requirements of successful technologists held firmly in mind, the University developed our signature approach to technology education using the following contributing and balancing pieces. The five styles that the University delivers (used in combination in all online and on-campus classes) are the following:

- Modified Lecture
- Student Teachback
- Tutorial Learning
- Discovery Learning
- Group Recollection

Modified Lecture is an instructor-facilitated interactive presentation of information through a mix of dialogue and discussion in both on-campus classes and through threaded discussions on the website. The goal is to put information into the hands of the students while engaging them in the learning process as active participants.

Tutorial Learning is a presentation of new material through a step-by-step process with either specific guidance and directions from the instructor or self-directed learning following instructional guidelines provided in an online format. The goal of tutorial instruction is to reinforce the cumulative success of all participants in a hands-on, skill-building experience.

Group Recollection deepens information understanding and retention through engagement with groups of peers. During Group Recollection, students are informally organized into teams to recall and apply their understanding of previously covered materials. Students collaborate and work in teams to create technologies, solve problems and complete projects. Group Recollection teaches valuable work skills and ethics that parallel the actual workplace.

Student Teachback creates an opportunity for students to develop and present new material to their peers. As a learning method, Teachback creates investment by making ownership of knowledge a student responsibility instead of solely the realm of the faculty. The goal of this method is to allow for creativity, assimilation and retention while developing both self-confidence and professional communication skills.

Discovery Learning engages students by encouraging them to be active knowledge discoverers throughout their education. Discovery Learning works at three levels within the UAT environment and that drives students towards the completion of complex work within their disciplines. Students work individually or in teams and compare methods and processes across teams. In open-discovery, both outcome and process are proposed by the students, and the faculty member serves as a supporting resource, progress checker and mentor.

By delivering curriculum through a variety of methods, UAT ensures that students will gain important skills through group interaction, as well as learning independence and time management.

TIERED CURRICULUM

The next element within our signature pedagogy is the University's tiered curricular approach to technology program design. Based on feedback from faculty, industry, alumni and students, this multilevel approach was developed to ensure that our students not only continue to receive the latest in applied technology but surround and balance those skills with grounding theory and a synthesis product (i.e., complete, complex works) in all discipline areas. The three-tiered approach moves students through coursework designed to present the following:

- Conceptual/Foundational
- Skills Development
- Synthesis

Conceptual/Foundational courses are designed to provide the students with background and fundamental skills so that they may have an understanding of the intellectual and systemic underpinnings of their technology discipline. These courses may be considered the "pure information delivery" courses they will experience at UAT and provide the basis upon which dynamic application and discovery can occur.

Skills Development courses are designed to expose students to the latest technology tools associated with their programs. This can range from software packages and applications to networking hardware, communication and writing within the discipline. Students produce complete works at this level in their disciplines through guided or goal-based discovery learning techniques.

Synthesis courses are designed for students to work independently or in teams to apply their knowledge to broader projects and produce complete, complex works in their discipline. Students are encouraged to propose their

own projects and define the methods or process by which the project will be completed. Generally, these courses are approached from a "tool agnostic" standpoint where the technology chosen to complete the project is a student choice and is based upon the appropriateness of the tool to the outcome rather than prescribed by the class itself. These courses are focused towards larger, real-world projects.

DYNAMIC LEARNING

UAT has created an educational environment that's tailored to individual learning styles, with a curriculum and project-creation experience that is continually evolving and changing—with guidance from the student, professors, family members, mentors and peers. This dynamic on-campus and online learning provides the ideal setting for students to realize their highest learning potential. Dynamic Learning continuously engages students in a technology-rich educational environment.

External Learning

External learning activities center on students and teams leaving campus to work with industry professionals to develop learning skills that are aligned with real-world situations including symposiums, competitions and industry trade shows.

Flexible Scheduling

UAT builds its course offerings each semester with a variety of scheduling models including resident, blended and fully online courses. With out-of-state residents constituting approximately 80% of our population, students sometimes travel over the summer months visiting family or completing required internships in their programs, so this facet of our signature pedagogy is not only beneficial to modern learners but is required to meet their needs.

Year-Round Learning

While flexibility on when and where learning occurs is key to the modern learner, year-round immersion in a UAT technology discipline is equally important for two reasons. First, one expectation of our graduates is that they will have worked in collaborative teams to produce complete, complex works in their discipline as undergraduates. Taking the summer (or any semester) off can make the completion of team projects difficult. Second, UAT believes that students should experience the lifelong learning practices and thinking habits that will be needed after graduation, and stopping learning for a semester does not reflect this reality. Therefore, UAT's degree programs are year-round in nature.

Customized Curriculum

This element in the learning environment at UAT allows students to combine customized classes into their Program of Study to enrich their learning experience. This makes a UAT technology degree as flexible in terms of content as it is in terms of delivery. Some options may include special topics courses, applied projects, applied research, internships, or independent study.

Student Innovation Project

UAT encourages students to advance society through the ethical development of tomorrow's most innovative technologies. Each freshman crafts an idea for a technology that accomplishes this mission and, over the course of their studies, with continual feedback from professors, professionals and peers, develops this concept into a complete Student Innovation Project.

Internship

Internships are the synthesis of a student's coursework, where they apply their learning to real-world applications and situations in their field of study. Students are expected to complete an internship to achieve specific objectives and learning goals that strengthen the value of their degree and their value to industry employers unless the student can otherwise demonstrate practiced work experience.

Independent Study

Students can use independent study to rigorously explore ideas and applications where specific courses have not yet been created. Working with a faculty mentor, students identify learning goals and apply a high degree of discipline and motivation to deeply explore new topics, innovations and applications of technology.


UNDERGR
DEGREE
PROGRAM

UNDERGRADUATE DEGREE PROGRAMS

PROGRAM OF STUDY

A program of study is the compilation of courses, credit hours and grades that make up a student's educational degree at the University. A program of study includes those courses a student needs to take to complete their degree requirements, and courses currently in progress as well as courses already completed by the student. Students enrolled in any of UAT's Undergraduate degree programs attend a full-time program. All undergraduate programs incorporate General Education, University Core and Major-Specific Requirements in the program of study.

UNIVERSITY CORE AND GENERAL EDUCATION

University Core and General Education Objectives—Undergraduate Degree

1. Student as globally minded individual: develops perspective on global matters, historical events, social conditions, and related developments through knowledge gathering and critical inquiry; makes connections between disparate ideas, concepts, and events.
2. Student as problem-solver: articulates and solves problems, offers solutions, utilizes diverse thinking strategies appropriately.
3. Student as applied scientist: comprehends scientific principles and methods, conducts and interprets quantitative analysis, synthesizes knowledge of social and natural sciences.
4. Student as communicator: develops individual voice in oral and written communication, articulates concepts and perspectives.
5. Student as body-conscious, self-aware individual: articulates role of physiology and psychology within context of greater human experience, acts to manage physical and psychological capabilities.
6. Student as community member: understands community concerns, synthesizes and applies practical knowledge to determine community needs and solutions, engages with community.

University Core

The University's Core curriculum addresses the question "What do all students of technology need to know?" The Core prepares students to become part of, and be influential within, a globalized, technocentric world. To that end, Core classes engage students in the following ways:

- Core classes address universal concerns of all technological peoples and societies, including legal, ethical, historical, and social ramifications of technological advancements.
- Core classes provide global contexts for skills and practices learned within specific majors.
- Core classes offer educational frameworks for students to think independently and practice professional skills-building.
- Core classes promote technological innovation, and invite students to explore their capacities as innovators of the 21st century.

Classes within the Core curriculum complement all of our majors and enable fulfillment of the University's mission to educate students to become innovators. It is essential to the UAT student experience that the challenges they will face in the global community are easily comprehended with regard not only to specific industries and professions, but also to processes of continuous and often exponential change. In order to become thinking innovators, students must be able to comprehend how change occurs and why. Regardless of their selected degree, all students within the University are required to complete the Core curriculum in order to earn their degree from the University.

University Core Courses–Bachelor's Degree

LAW370	Legal Issues in Technology
PRO103	Professional Skills Development
PRO211	Student Innovation Project
PRO483	Student Innovation Project and Portfolio Presentation
TCH150	Technology and Society
TCH301	Ethics in Technology

University Core Courses–Associate's Degree

PRO103	Professional Skills Development
PRO211	Student Innovation Project
TCH150	Technology and Society

General Education

UAT's general education offers students transferable life skills that complement technical skills learned in the majors. Students receive invaluable education in the humanities, mathematics, science, languages, and other topics that build a foundation for discourse and expression that enriches their experience beyond the academic forum. This approach meets widespread expectations of the undergraduate learning experience that honors the motivation for higher education: betterment of self and the world around us.

General education brings into clarity the spectrum of human expression, modes of thought, and perspectives that enable all students to make profound connections between their technical skills and human development. In doing so, it complements the university's technology-intensive environment by making students aware of how the broad spectrum of human experience and knowledge integrates with their technology discipline. Regardless of their selected degree, all students within the University are required to complete the general education curriculum in order to earn their degree from the University.

The general education curriculum engages students in the following ways:

- Articulation of student's technological visions in globally aware contexts
- Effective communication, both orally and in written form
- Fluency in inquiry and problem-solving
- Knowledge-gathering in non-technical areas
- Comprehension of external perspectives

General Education Requirements—Bachelor of Arts Degree

Minimum 36 total general education credit hours, including:

- TCH115 Thinking Strategies
- Humanities and Social Sciences—Minimum 18 credit hours, minimum of 6 upper division credits, including:
  - ENG101 Composition I
  - ENG102 Composition II
  - COM226 Communication in Technology
- Mathematics and Science—Minimum 9 credit hours

General Education Requirements—Bachelor of Science Degree

Minimum 36 total general education credit hours, including:

- TCH115 Thinking Strategies
- Humanities and Social Sciences—Minimum 12 credit hours, minimum of 3 upper division credits, including:
  - ENG101 Composition I
  - ENG102 Composition II

    - COM226 Communication in Technology
- Mathematics and Science—Minimum 18 credit hours, minimum of 3 upper division credits

General Education Requirements—Associate of Arts Degree
Minimum 24 general education credit hours, including:
- TCH115 Thinking Strategies
- Humanities and Social Sciences—Minimum 9 credit hours including:
    - ENG101 Composition I
    - ENG102 Composition II
- Mathematics and Science—Minimum 6 credit hours

General Education Requirements—Associate of Science Degree
Minimum 24 general education credit hours, including:
- TCH115 Thinking Strategies
- Humanities and Social Sciences—Minimum 9 credit hours including:
    - ENG101 Composition I
    - ENG102 Composition II
- Mathematics and Science—Minimum 9 credit hours

MAJOR-SPECIFIC REQUIREMENTS

Majors are established by the University in order to provide specialization and advanced work in a technological discipline. Each major represents an industry current technology field and is designed to change as the technology within the field progresses. In completing the course requirements of a major, students select topic areas that emphasize skills associated with specific industry targets.

The University has provided in this catalog grouped elective courses beyond the required courses for each major; however, each student may select courses from any major they desire in combination in order to individually customize their educational degrees beyond the minimum requirements.

Students are encouraged to seek out guidance from their Academic Advisor when making course choices.

GRADUATION REQUIREMENTS

A student will have earned a UAT degree when they have successfully fulfilled all of the following requirements for graduation:
1. Successful completion of an approved program of study.
2. Successful completion of the minimum credits required by UAT's accrediting body for the desired degree.
3. Meet minimum Satisfactory Academic Progress Standards at the completion of their program of study.
4. Submittal of a completed and approved Application for Degree with the Office of the Registrar.

ONLINE REGISTRATION

For convenience and progression toward the degree sought, UAT registers courses each semester on behalf of students pursuing their studies Online. Courses indicated in the catalog represent the pool of courses from which the University will build students' programs of study.

ARTS DEGREE PROGRAMS

Arts degrees at University of Advancing Technology are focused at the intersection of creativity, traditional art theory and technology application. At the core of these degrees is the understanding that art and technology reach into everyone's lives, virtually all of the time, because technologies engage the primary senses of sight, sound and touch. Combining traditional art theory with technology application allows for the creation of intuitive, meaningful and striking presentation of information and innovation in the creation of product design and implementation. Students within arts programs will gain an appreciation for art, design, and the intersection of these concepts with new technologies.

BACHELOR OF ARTS (BA) DEGREE REQUIREMENTS

Minimum General Education Credits	36
Minimum Total Semester Credits	120

Within 120 minimum credit hours, the following requirements also apply:
- Minimum Degree-Specific Credits 39
- Minimum Total 300/400 Level Credits 39

ASSOCIATE OF ARTS (AA) DEGREE REQUIREMENTS

Minimum General Education Credits	24
Minimum Total Semester Credits	60

Within 60 minimum credit hours, the following requirements also apply:
- Minimum Degree-Specific Credits 15

GRADUATION REQUIREMENTS

- Successful completion of requirements in an approved program of study.
- Achieved a minimum CGPA of 2.0 on a 4.0 scale.
- Completion of Student Innovation Project and portfolio requirement. Student Innovation Project and portfolio requirements include the submission and review of primarily digital artifacts to demonstrate the student's capabilities within the discipline being studied. (Bachelor's degree candidates only.)

Upon successfully completing the above requirements and meeting all University graduation requirements put forth in the graduation policy, a Bachelor or Associate of Arts degree will be awarded.

DEGREES

Courses within degrees are noted for students within each degree description. Taking all recommended credits within a degree may result in minimum credit hours required in the degree program exceeding 120 in the bachelor's program and 60 in the associate's program. Additionally, depending on the major, certain General Education or other courses may be required to fulfill prerequisites. Seeking guidance from a Student Services Advisor is encouraged to promote each student's highest success.

GAME ART AND ANIMATION

Students in the Game Art and Animation program will gain an insight into what is involved at all levels of game development to create 3D art assets for multiple video game platforms such as PC, consoles, handheld games, Internet, phone and other hybrids. Students will master the artistic principles used in 3D video games art asset creation such as color theory, lighting, shading,

anatomy, life drawing, perspective, scene staging, modeling low polygon and high polygon, 3D mesh topology, texturing, rigging, hand key character and prop animations, as well as motion capture and facial animation. Students in this program will be prepared for jobs such as character artist modeler and texture artist, character artist animator and rigger, environment artist modeler and texture artist, environment artist animator, mechanical mesh modeler and texture artist, and mechanical mesh animator and rigger.

GAME ART AND ANIMATION DEGREE OBJECTIVES

1. Demonstrate and communicate aesthetic skills and choices based on traditional art theories and current game development practices.
2. Conceptualize and generate pre-production art assets and prototypes usable for multiple game platforms.
3. Create 2D and 3D art assets such as characters, props, textures environment elements (terrain, ecosystems, architecture and skybox), and collision objects.
4. Create 2D and 3D character, environmental and FX animation assets appropriate for use in game projects.
5. Within a production pipeline adapt, export and integrate assets into projects given confines of a project's game engines, tools and other constraints.
6. Establish collaboration, mentorship and professional skills by leading team projects, coaching junior team members, and working with other disciplines to deliver highly polished and completed projects.

GAME ART AND ANIMATION DEGREE COURSES

Courses in bold text are required for a Bachelor of Arts in Game Art and Animation. Courses with an asterisk (*) are required for an Associate of Arts in Game Art and Animation.

Conceptual/Foundational Courses

ART112*	**Graphic Design Foundational Principles**
ART121*	**Beginning Drawing I**
ART233	**Concept Art**
ART234	Storyboarding
ART240	Figure and Character Sculpting
GAA110*	**Introduction to Game Art and Animation**
GAA220*	**3D Modeling Environments and FX**
GAA230	**3D Modeling Characters and Vehicles**
GAA240*	**Game Texturing**
GAM125	Introduction to Game Development

Skills Development Courses

GAA260	User Interface Design
GAA310	Digital Sculpting
GAA320	**Environmental and FX Animation**
GAA330	**Characters and Vehicles Animation**
GAA360	UI Design and Animation
MTM125	Introduction to 3D Studio Max and Maya

Synthesis Courses

GAA340	Platform Integration
GAA420	Advanced Game Environment Creation
GAA430	Advanced Character Rigging and Mocap Animation
GAA440	Advanced Game Character Creation
GAA450	Advanced Materials, Shaders and Lighting
GAA490	Industry Professional Development
GAM281	Production Studio I
GAM381	Production Studio II

The University will run courses from this list based on program enrollment, student need and course availability.

Job Titles

The Department of Education asks universities to associate their programs with relevant Classification of Instructional Programs (CIP) codes and specific Standard Occupational Classification (SOC) codes so that potential students can look at general occupations that would associate with the program. The CIP code and associated SOC codes and titles are supplied below for this program.

Bureau of Labor Statistics (BLS) Standard Occupational Classification (SOC) Codes and ONet Links*
15-1021 Computer Programmers
27-1014 Multi-Media Artists and Animators
27-1024 Graphic Designers

*To retrieve a summary report from ONet please visit www.onetonline.org and enter the SOC code

GAME DESIGN

Game Design students focus on the design principles, skills and techniques required to create mechanics, design documents and functioning prototypes for innovative game projects. Game Design students will be exposed to all the tools of the trade, as well as programming and asset creation skill sets. The coursework emphasizes design skills such as strong initial concepts, design documentation, game balancing and play-testing, interactive storytelling and interface design. Students in the Game Design program will also take a critical approach to the study of gameplay, player interaction and community dynamics as well as the unique features of the numerous game platforms available in the marketplace. In team-based projects, design students will work with artists and programmers to create complete projects. Applying all the elements of the game creation process, Game Design students will also develop the leadership skills to see projects through from initial concept to publisher-ready final product.

GAME DESIGN DEGREE OBJECTIVES

1. Prototype and complete original games for multiple platforms using complete documentation and following the full game production pipeline.
2. Create and implement game elements, systems and play mechanics using industry standard tools, techniques and production methods, including both art and scripting/programming applications.
3. Demonstrate best practices of effective game design.
4. Demonstrate the ability to evaluate game designs for a variety of game play mechanics, game applications and game genres.
5. The creation of game design documentation that clearly communicates game design elements and mechanics to both programming and art team members.
6. Establish collaboration, mentorship and professional skills by leading

team projects, coaching junior team members, and working with other disciplines to deliver highly polished and completed projects.

GAME DESIGN DEGREE COURSES

Courses in bold text are required for a Bachelor of Arts in Game Design. Courses with an asterisk (*) are required for an Associate of Arts in Game Design.

Conceptual/Foundational Courses

CSC102*	**Introduction to Programming**
GAM101*	**Introduction to Game Design**
GAM125*	**Introduction to Game Development**
GAM170*	**Game Design Workshop I**

Skills Development Courses

GAM104	Introduction to Game Programming
GAM113	Introduction to Game Tools
GAM175*	**Game Testing and Analysis**
GAM200	Critical Game Studies
GAM213	Game Tools II
GAM215	Game Scripting
GAM218	Game Scripting for Designers
GAM230	Level Design
GAM235	Game AI Concepts

Synthesis Courses

GAM281	Production Studio I
GAM330	Advanced Level Design
GAM351	Writing for Interactive Games
GAM370	Game Design Workshop II
GAM375	Rapid Game Prototyping and Experimental Gameplay
GAM381	Production Studio II
GAM385	Casual Game Design
GAM404	**Applied Game Development**
GAM430	Game Production and Documentation
GAM460	**Advanced Gameplay Project**

Recommended Elective

GAM150	Evolution of Electronic Games

The University will run courses from this list based on program enrollment, student need and course availability.

Job Titles

The Department of Education asks universities to associate their programs with relevant Classification of Instructional Programs (CIP) codes and specific Standard Occupational Classification (SOC) codes so that potential students can look at general occupations that would associate with the program. The CIP code and associated SOC codes and titles are supplied below for this program.

Bureau of Labor Statistics (BLS) Standard Occupational Classification (SOC) Codes and ONet Links*

15-1021 Computer Programmers

27-1014 Multi-Media Artists and Animators

27-1024 Graphic Designers

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VIRTUAL MODELING AND DESIGN

Digital modeling and animation technologies have become a part of many entertainment industries but the availability of these technologies for more serious and productive businesses is becoming main stream. Whether developing new ways to produce electronic assets or using these electronic assets to view data or virtual spaces, the technology used to design, model and view information is advancing. Applications in this degree can vary in focus from using technology to develop 3D models, using electronic assets to visualize data outputs or linking the electronic assets and real-world assets together to enhance the understanding of the context of a situation. Each of these presents specific challenges to the developer but all rely on the integration of visualization and information.

VIRTUAL MODELING AND DESIGN DEGREE OBJECTIVES

1. Establish and defend an artistic style within your work based on sound artistic theories, practices and knowledge.
2. Build and modify 3D assets utilizing advanced 3D visualization software and hardware to capture real-world objects and animation.
3. Integrate animated visualization with static data to visually display the results or outcomes of the data, such as studies of movement or accident recreation.
4. Analyze and display real-time data utilizing animated visualization to enhance the understanding of the data such as stock market trends.
5. Create an animated visualization that accurately simulates the effect of a parametrically based, physics-driven particle system in a virtual 3D environment.
6. Create an augmented reality, animated visualization in which physical and virtual objects coexist and can be interacted with in a shared space and environment.

VIRTUAL MODELING AND DESIGN DEGREE COURSES

Courses in bold text are required for a Bachelor of Arts in Virtual Modeling and Design. Courses with an asterisk (*) are required for an Associate of Arts in Virtual Modeling and Design.

Conceptual/Foundational Courses

ART103	Digital Asset Creation
ART112	Graphic Design Foundational Principles
ART121	Beginning Drawing I
ART233	Concept Art
ART236	Basic Character Figure Drawing
DVA101	Digital Video Fundamentals
DVA110	Lighting and Environment Design
DVA130	Movie Theory
GAA110	Introduction to Game Art and Animation
GAA340	Platform Integration
VIS110*	**Scientific Visualization**

Skills Development Courses

DVA241	Digital Video Production
GAA220	3D Modeling Environments and FX

GAA230	3D Modeling Characters and Vehicles
GAA240	Game Texturing
GAA260	User Interface Design
GAA310	Digital Sculpting
GAA320	Environmental and FX Animation
GAA330	Characters and Vehicles Animation
GAA360	UI Design and Animation
MTM125	Introduction to 3D Studio Max and Maya
VIS210*	**Information Visualization**
VIS310	**Embedded Visualization**

Synthesis Courses

DVA323	Digital Video Production Studio I
DVA492	Digital Video Production Studio II
DVA493	Digital Video Production Studio III
GAA430	Advanced Character Rigging and Mocap Animation
GAA490	Industry Professional Development
VIS350	Engineering for Visualization
VIS410	**Scientific Visualization Project**

The University will run courses from this list based on program enrollment, student need and course availability.

Job Titles

The Department of Education asks universities to associate their programs with relevant Classification of Instructional Programs (CIP) codes and specific Standard Occupational Classification (SOC) codes so that potential students can look at general occupations that would associate with the program. The CIP code and associated SOC codes and titles are supplied below for this program.

Bureau of Labor Statistics (BLS) Standard Occupational Classification (SOC) Codes and ONet Links*
15-1021 Computer Programmers
27-1014 Multi-Media Artists and Animators
27-1024 Graphic Designers

*To retrieve a summary report from ONet please visit www.onetonline.org and enter the SOC code

SCIENCE DEGREE PROGRAMS

Science programs at UAT were created in response to a need within industry for professional technology graduates in the emerging disciplines at the intersection of science and technology. Each science degree program requires students to explore the conceptual, scientific underpinning of their technology discipline so that, as the discipline advances, their capacity advances with it. Each program offers an opportunity to understand how technology integrates into society, adding functionality and speed to activity. The content of the programs is designed to provide knowledge needed to ensure success in a specific and general technology climate where continuously expanding computer expertise is vital. Students in these programs will have the opportunity to learn and create software applications that advance their discipline. Graduates will be prepared for employment in companies of various size and complexity, from small businesses to enterprise-level corporations. Science programs require mathematics and science expertise.

BACHELOR OF SCIENCE (BS) DEGREE REQUIREMENTS

Minimum General Education Credits	36
Minimum Total Semester Credits	120
Within 120 minimum credit hours, the following requirements also apply:	
Minimum Degree-Specific Credits	39
Minimum Total 300/400 Level Credits	39

ASSOCIATE OF SCIENCE (AS) DEGREE REQUIREMENTS

Minimum General Education Credits	24
Minimum Total Semester Credits	60
Within 60 minimum credit hours, the following requirements also apply:	
Minimum Degree-Specific Credits	15

GRADUATION REQUIREMENTS

- Successful completion of requirements in an approved Program of Study.
- Achieved a minimum 2.0 CGPA on a 4.0 scale.
- Completion of Student Innovation Project and portfolio requirement. Student Innovation Project and portfolio requirements include the submission and review of primarily digital artifacts to demonstrate the student's capabilities within the discipline being studied. (Bachelor's degree candidates only.)

Upon successfully completing the above requirements and meeting all University graduation requirements put forth in the graduation policy, a Bachelor or Associate of Science degree will be awarded.

DEGREES

Courses within degrees are noted for students in each degree description. Taking all recommended credits within a degree may result in minimum credit hours required in the degree program exceeding 120 in the bachelor's program and 60 in the associate's program. Additionally, depending on the major, certain General Education or other courses may be required to fulfill prerequisites. Seeking guidance from a Student Services Coordinator is encouraged to promote each student's highest success.

ADVANCING COMPUTER SCIENCE

The Advancing Computer Science (ACS) degree involves students in the craft of programming. The craft of programming transcends individual programming languages and emphasizes design across multiple scales, from the design of individual programs to complex multi-platform software architectures. The ACS program balances the science of computing and the art of design, with the application of these principles to real-world problems. Graduates in ACS will be prepared for software development positions where understanding of algorithms, computing theory and complex software design are important.

ADVANCING COMPUTER SCIENCE DEGREE OBJECTIVES

1. Follow a software development process to analyze a problem, and to design, build, test and document software solutions.
2. Demonstrate software development skills using more than one programming language and development environment.
3. Design and implement software solutions across multiple platforms.
4. Design and implement compilers for a simple programming language.
5. Design and implement multitasking software systems that effectively

leverage multiple cores.

6. Within software solutions describe, implement and analyze data structure techniques such as lists, trees, hash tables, graphs, along with sorting and searching algorithms.

ADVANCING COMPUTER SCIENCE DEGREE COURSES

Courses in bold text are required for a Bachelor of Science in Advancing Computer Science. Courses with an asterisk (*) are required for an Associate of Science in Advancing Computer Science.

Conceptual/Foundational Courses

CSC102*	**Introduction to Programming**
CSC202	C# Programming I
CSC203	Java Programming I
CSC208	Introduction to Assembly
CSC209	Open Source Programming I

Skills Development Courses

CSC211	Introduction to SQL
CSC215*	**C/C++ Programming I**
CSC262	C# Programming II
CSC263	Java Programming II
CSC269	Open Source Programming II
CSC275*	**C++ Programming II**
CSC308	Mathematics for Theory of Computation
CSC318	**Software Engineering Principles**
CSC330	Mobile Platform Software Development
CSC350	Software Quality Assurance
CSC382	**Data Structures and Algorithms**

Synthesis Courses

CSC313	**Operating Systems Theory**
CSC413	**Advanced Software Development I**
CSC452	**Compilers**
CSC453	**Advanced Software Development II**
CSC471	**Parallel Programming**

Recommended General Education Courses:

MAT220	Statistics
MAT251	Calculus II

The University will run courses from this list based on program enrollment, student need and course availability.

Job Titles

The Department of Education asks universities to associate their programs with relevant Classification of Instructional Programs (CIP) codes and specific Standard Occupational Classification (SOC) codes so that potential students can look at general occupations that would associate with the program. The CIP code and associated SOC codes and titles are supplied below for this program.

Bureau of Labor Statistics (BLS) Standard Occupational Classification (SOC) Codes and ONet Links*

15-1021 Computer Programmers

15-1099 Computer Specialists, All other

25-1021 Computer Science Teachers, Postsecondary

*To retrieve a summary report from ONet please visit www.onetonline.org and enter the SOC code

GAME PROGRAMMING

Courses in game programming will emphasize the essential issues and the skills required to develop games for multiple platforms such as web, console, PC and mobile devices. These skills have broader applications in related industries such as entertainment, business, research and training. Game programming students begin with the programming principles, skills and techniques shared in all programming disciplines and then specifically focus on game-specific features and techniques. Game programming emphasizes C++ programming, scripting, data handling, DirectX/Open GL development, game engine architecture, gameplay interaction, artificial intelligence, networking and the use of middleware and industry APIs. Students in game programming will also develop a critical approach to the study of gameplay, interaction and design. The UAT game programming student will have a broad, deep skill set and be comfortable on many platforms and with a myriad of languages.

GAME PROGRAMMING DEGREE OBJECTIVES

1. Implement multiple completed games, including 3D games, using common tools, languages and software for web, console, PC or mobile platforms.
2. Design and develop the architecture and infrastructure needed to support a complete game project.
3. Implement and analyze fundamental data structures and algorithms associated with game applications.
4. Use software development processes to analyze a project problem, and to design, build and test a corresponding software solution.
5. Demonstrate development skills using more than one programming language, development environment, platform and source control system.
6. Examine and develop advanced and/or experimental topics in game programming.

GAME PROGRAMMING DEGREE COURSES

Courses in bold text are required for a Bachelor of Science in Game Programming. Courses with an asterisk (*) are required for an Associate of Science in Game Programming.

Concepts/Foundational Courses

CSC102*	**Introduction to Programming**
CSC202	C# Programming II
CSC203	Java Programming II
CSC215*	**C/C++ Programming I**
GAM104*	**Introduction to Game Programming**
GAM205*	**Gameplay Programming Concepts**

Skills Development Courses

CSC275	C++ Programming II
CSC330	Mobile Platform Software Development
CSC382	**Data Structures and Algorithms**
GAM175	Game Testing and Analysis

GAM215	Game Scripting
GAM240*	**Game Engine Programming I**
GAM275	Mobile Game Programming
GAM303	Applied Game AI Concepts
PHY350	Physics Game Programming

Synthesis Courses

GAM281	Production Studio I
GAM315	Console Game Development
GAM324	Graphics Programming
GAM341	Game Tools Development
GAM375	Rapid Game Prototyping and Experimental Gameplay
GAM381	Production Studio II
GAM403	**Advanced Game Programming Topics**
GAM460	**Advanced Game Project**

Recommended Electives

CSC262	C# Programming II
CSC263	Java Programming II
CSC313	Operating Systems Theory
CSC413	Advanced Software Development I

Recommended General Education Courses:

MAT251	Calculus II
MAT342	Linear Algebra

The University will run courses from this list based on program enrollment, student need and course availability.

Job Titles

The Department of Education asks universities to associate their programs with relevant Classification of Instructional Programs (CIP) codes and specific Standard Occupational Classification (SOC) codes so that potential students can look at general occupations that would associate with the program. The CIP code and associated SOC codes and titles are supplied below for this program.

Bureau of Labor Statistics (BLS) Standard Occupational Classification (SOC) Codes and ONet Links*
15-1021 Computer Programmers
27-1014 Multi-Media Artists and Animators
27-1024 Graphic Designers

*To retrieve a summary report from ONet please visit www.onetonline.org and enter the SOC code

NETWORK SECURITY

A network security specialist is a professional who focuses on ensuring information confidentiality, integrity and availability. This includes the design of information assurance programs, policies, procedures and architecture utilizing the concepts of "security by design." Network security utilizes proactive techniques, including "defense-in-depth" and layered security, to mitigate or eliminate vulnerabilities in information systems and to protect against potential exploitation. Professionals in this career path may be highly technical and practice active (and sometimes aggressive) technical security methodologies to test and verify security implementations at various levels within an organization.

Security professionals possess intimate knowledge of technical business critical components. They also provide analysis and assessment of the security risks and requirements of those information systems while still developing non-technical skills such as teamwork, troubleshooting, problem solving, documentation and interpersonal communication. The Network Security degree reflects the application of theory and is aligned with industry standards and guidelines. It provides students with the opportunity to synthesize and apply the vital skills and knowledge necessary to succeed in the workforce.

NETWORK SECURITY DEGREE OBJECTIVES

1. Create a network infrastructure design communications document that includes identified hardware components, connections to outside world, identified physical layer connectivity (media), and addressing.
2. Install, configure and test security hardware and software tools with supporting documentation such as port scanners, vulnerability detection systems, intrusion detection systems, firewalls, system hardening, anti-virus tools, patch management, auditing and assessment.
3. Construct, implement and document a script or a program to automate a security-related process or other task such as installation, administration, management, mapping resources, logon scripts, patch management, updates, auditing, analysis and assessment.
4. Create a policy or procedure that addresses events such as: a disaster recovery plan, a business continuity plan, incident response policy, acceptable usage document, information security policy, physical security policy, assessments or troubleshooting procedures.
5. Develop a research report or implementation plan concerning legal and ethical best practices and mandated requirements that pertain to information security.
6. Research, document, test and evaluate several current industry information security based threats, risks, malicious activities, covert methodology, encryption technologies, mitigation techniques or unconventional tactics to prevent loss of sensitive information and data confidentiality, integrity and availability.

NETWORK SECURITY DEGREE COURSES

Courses in bold text are required for a Bachelor of Science in Network Security. Courses with an asterisk (*) are required for an Associate of Science in Network Security.

Conceptual/Foundational Courses

CFR101	Computer Forensic Essentials
NTS201*	**Security Essentials**
NTS310	Social Engineering
NTS405	Incident Response
NTS426	Reverse Engineering
NTW102*	**Foundations of Network Engineering**
NTW214	Network Engineering Hardware
NTW216*	**Foundations of Systems Administration**

Skills Development Courses

CFR210	Forensic Tools and Incident Response
CSC211	Introduction to SQL
NTS225	Programming for Hackers
NTS235	Security Applications
NTS330	**Applied Exploits and Hacking**
NTS350	Network Security Monitoring
NTS370	Shell Scripting for Hackers

NTS442	Collegiate Cyber Defense Competition
NTS465	Security Evaluation and Assessment Methodology
NTW245	Applied Mobile Computing and Cloud Collaboration Technologies

Synthesis Courses

NTS325	Exploit Development
NTS415	Network Defense and Countermeasures
NTS435	**International and Federal INFOSEC Standards and Regulations**
NTS445	Incident Response and Management
NTW440	Business Continuity/Disaster Recovery

Recommended Electives

CFR105	Understanding File Systems and Structures
CFR230	Investigative Techniques
CIS210	Linux I
MAT220	Statistics

Level I programming course
Level II programming course

The University will run courses from this list based on program enrollment, student need and course availability.

NSA-Certified Courseware

The Information Assurance Courseware Evaluation (IACE) certifies that UAT meets all of the requirements of a specific CNSS standard within its courseware. The IACE Program is currently managed by the National Information Assurance Education and Training Program Office within the Information Assurance Directorate at NSA. UAT meets the national training and education standards for the duties and responsibilities of Information Systems Security Professional, Senior Systems Managers, System Administrators and Information Systems Security Officers. The following are the certified course category standards available. Students may choose to meet any or all of the standards listed here. The following are the courses students must take if they decide to pursue each standard:

- For NSTISSI-4011, National Training Standard for Information Systems Security (INFOSEC) Professionals: NTS201
- For NSTISSI-4013, National Information Assurance Training Standard For System Administrators (SA): NTS201 and NTS415
- For NSTISSI-4014, Information Assurance Training Standard for Information Systems Security Officers (ISSO): NTS445, NTS465 and NTW440

Job Titles

The Department of Education asks universities to associate their programs with relevant Classification of Instructional Programs (CIP) codes and specific Standard Occupational Classification (SOC) codes so that potential students can look at general occupations that would associate with the program. The CIP code and associated SOC codes and titles are supplied below for this program.

Bureau of Labor Statistics (BLS) Standard Occupational Classification (SOC) Codes and ONet Links*
11.3021 Computer and Information Systems Managers
15-1011 Computer and Information Scientists, Research
15-1051 Computer Systems Analysts
15-1061 Database Administrators
15-1071 Network and Computer Systems Administrators
15-1081 Network Systems and Data Communications Analysts
15-1099 Computer Specialists, All other
25-1021 Computer Science Teachers, Postsecondary

*To retrieve a summary report from ONet please visit www.onetonline.org and enter the SOC code

TECHNOLOGY FORENSICS

A technology forensics specialist is an Information Technology professional who supports the military, corporate, law enforcement and legal communities in the investigation and analysis of digital data. Students in the Technology Forensics degree will learn methods to obtain and document digital information, determine how information was compromised, trace attribution of malicious code and digital artifacts, and reverse engineer data in order to develop mitigations and countermeasures. Topics of study may include methods for discovering data in computers, networks and hand-held devices; recovering deleted, encrypted, corrupted or hidden information; the proper handling of evidence in accordance with laws and regulations; advanced malware detection; reverse engineering; and investigation of malicious code from a variety of sources including both common threat sources and the Advanced Persistent Threat (APT).

A technology forensics specialist is a role that will require the knowledge of systems and investigative techniques in order to impartially produce electronic evidence; develop attribution links; and counter advanced tactics, techniques, and protocols (TTP) of the adversary so that valuable data may be found in complex systems. Graduates from the program will have both the technical skills for recovering evidence and the presentation skills to provide both detailed technical and summary data to interested parties. This may include studies in the areas of electronic discovery, deposition and litigation, or in corporate personnel processes. Above all, this program will focus on learning the highly technical and cutting-edge technologies affecting IT systems today and tomorrow. This program will prepare students to anticipate new and emerging technologies so they can be successful within the rapidly evolving computer forensic environment and the increasingly complex threat landscape. This program provides students with the opportunity to synthesize and apply the vital skills and knowledge necessary to not only succeed in the workforce but to have a highly desirable and technical education setting them apart from traditional digital forensics programs. Instruction will lead students into hands-on and real-world situations, where they will gain invaluable experience working with actual systems, software, and networks. Further setting this program apart is the ability of students to work with the actual tools utilized by industry professionals and real-world malware in a controlled teaching environment.

TECHNOLOGY FORENSICS DEGREE OBJECTIVES

1. Articulate the complexity of and apply thinking skills to how the network and application infrastructure affects technology forensics investigations and incident response procedures.
2. Identify and apply in a forensics context the various topologies, standards, technologies and protocols employed in computer systems, including file system formats and their attributes.
3. Evaluate, select and deploy computer forensic measures for the response, mitigation and analysis of a security incident pertaining to digital artifacts and how information was compromised.
4. Analyze and evaluate the current investigative and legal aspects of information and computer forensics including electronic discovery,

deposition, litigation and corporate personnel processes.

5. Evaluate and execute the strategies, methodologies, technique, and state-of-the-art forensics tools for the preservation of digital evidence on computer systems, network systems and other electronic devices.
6. Create tracking processes to follow the trail of electronic evidence through digital systems, including documentation, formal reporting and presentation.

TECHNOLOGY FORENSICS DEGREE COURSES

Courses in bold text are required for a Bachelor of Science in Technology Forensics. Courses with an asterisk (*) are required for an Associate of Science in Technology Forensics.

Conceptual/Foundational Courses

CFR101*	**Computer Forensic Essentials**
CFR105*	**Understanding File Systems and Structures I**
CFR106*	**Understanding File Systems and Structures II**
CIS210	Linux I
NTS201	Security Essentials
NTW102	Foundations of Network Engineering
NTW214	Network Engineering Hardware

Skills Development Courses

CFR210	Forensic Tools and Incident Response
CFR225	Operating System Forensics
CFR227	Malware Detection and Analysis
CFR370	Corporate and Business Issues in Digital Forensics
NTS330	Applied Exploits and Hacking
NTS350	Network Security Monitoring
NTS370	Shell Scripting for Hackers
NTW216 *	**Foundations of Systems Administration**

Synthesis Courses

CFR410	Network Forensics
CFR412	DoD Digital Forensics Challenge
CFR420	Advanced Forensics
LAW480	Forensic Law
NTS415	Network Defense and Countermeasures
NTS435	International and Federal INFOSEC Standards and Regulations

Recommended Electives

MAT220	Statistics
Level I Programming course	

The University will run courses from this list based on program enrollment, student need and course availability.

Job Titles

The Department of Education asks universities to associate their programs with relevant Classification of Instructional Programs (CIP) codes and specific Standard Occupational Classification (SOC) codes so that potential students can look at general occupations that would associate with the program. The CIP code and associated SOC codes and titles are supplied below for this program.

Bureau of Labor Statistics (BLS) Standard Occupational Classification (SOC) Codes and ONet Links*

11-3021 Computer and Information Systems Managers
15-1011 Computer and Information Scientists, Research
15-1051 Computer Systems Analysts
15-1061 Database Administrators
15-1071 Network and Computer Systems Administrators
15-1081 Network Systems and Data Communications Analysts
15-1099 Computer Specialists, All other
25-1021 Computer Science Teachers, Postsecondary

*To retrieve a summary report from ONet please visit www.onetonline.org and enter the SOC code

WEB DESIGN

The Bachelor of Science in Web Design combines the critical elements of design, development and marketing to create competitive web professionals. Students in the program will explore topics in web design from aesthetic principles that include 2D design, graphics, typography and color. Building from this base, students will use current tools to design, develop and deploy fully functioning web presences. Additionally, students will gain experience applying new marketing techniques and strategies to optimize web presences in both mobile and traditional modes. Students will research and explore social media strategies and create web experiences designed to persuade the end user. Graduates from the Bachelor's program in Web Design will be prepared for careers as UI designers, web analysts, user experience designers, information architects, digital marketing specialists and others.

WEB DESIGN DEGREE OBJECTIVES

1. Employ current web development tools to design, develop and deploy fully functioning websites that operate across multiple browsers and platforms.
2. Design effective web experiences that apply concepts of user interaction within the organization and presentation of information architecture.
3. Effectively apply content optimization techniques with respect to keywords, semantics, web copyrighting, graphics and search metrics.
4. Demonstrate the ability to work within a studio production pipeline to create and revise web and social media experiences that meet client timeline, design and quality requirements.
5. Apply aesthetic principles to create a professional web presence that addresses target audiences while matching design trends and client requirements.
6. Implement a social media strategies that effectively promote and drive web traffic to intended targets.

WEB DESIGN DEGREE COURSES

Courses in bold text are required for a Bachelor of Science in Web Design. Courses with an asterisk (*) are required for an Associate of Science in Web Design.

Conceptual/Foundational Courses

ART103	Digital Asset Creation
ART112	Graphic Design Foundational Principles
CIS100*	**Beginning Web Design**
CIS120*	**Web Design**
CIS240*	**Building Dynamic Websites I**
CIS260	**Social Media Applied**

CSC102*	**Introduction to Programming**
CSC202	C# Programming I
HCI101	Introduction to Human Computer Interaction
HCI102	Human Factors
MKT250*	Online Marketing Environments

Skills Development Courses

ART209	Computer Typography and Layout Design
CIS327	Mobile Web Initiatives
HCI250	User Experience Design and Testing
MTM213	2D Vector Animation
MTM235	Digital Illustration
MTM307	Advanced Photoshop

Synthesis Courses

CIS340	**Building Dynamic Websites II**
CIS430	**Best Practices in Web Production**
MKT330	SEO and Applied Online Marketing
MTM315	AS3 Web Application Development
MTM330	**Production Studio I**
MTM430	**Production Studio II**

The University will run courses from this list based on program enrollment, student need and course availability.

Job Titles

The Department of Education asks universities to associate their programs with relevant Classification of Instructional Programs (CIP) codes and specific Standard Occupational Classification (SOC) codes so that potential students can look at general occupations that would associate with the program. The CIP code and associated SOC codes and titles are supplied below for this program.

Bureau of Labor Statistics (BLS) Standard Occupational Classification (SOC) Codes and ONet Links*
15-1021 Computer Programmers
27-1014 Multi-Media Artists and Animators
27-1024 Graphic Designers

*To retrieve a summary report from ONet please visit www.onetonline.org and enter the SOC code

PROGRAM INFORMATION

CIP code	Programs Included	Delivery	Degree Level	% Completed On Time	Median Federal Loans	Median Private Loans	Median Institutional Debt
11.0101	Network Security	Online/ Accelerated	Bachelor	*	*	*	*
11.0101	Network Security	Online	Associate	*	*	*	*
11.0201	Game Programming	Online	Bachelor	*	*	*	*
11.0801	Game Design	Online	Associate	*	*	*	*
11.0801	Game Art and Animation, Game Design, Virtual Modeling and Design	Online	Bachelor	72.22%	$51,839.63	0	0
11.0803	Digital Animation	Online	Bachelor	*	*	*	*

Data represents students completing their program during the 2011-2012 award year.
*As a niche program with less than ten (10) graduates, we are restricted from publishing this data due to privacy regulations.


ONLINE
FACULTY

UAT-ONLINE FACULTY

George Ackerman
BA, Florida Atlantic – Criminal Justice
MBA, Nova Southeastern University
MS, Nova Southeastern University – Criminal Justice and Psychology
JD, Nova Southeastern University

Raja Almukahhal
BS, Idaho State University – Physics
MS, Idaho State University – Physics
PhD, Howard University – Theoretical Physics

Judith Anderson
BA, Western Illinois University – Education
MA, University of Phoenix – Education

Erik Arroyo
BA, University of Pittsburgh- Communication – Journalism
MBA, South University – Marketing

Senait Asmellash
BS, Addis Ababa University – Chemistry
MS, Addis Ababa University – Chemistry
PhD, Clarkson University – Chemistry

Diane Barrett
BS, Remington College – Business Operations
MS, Capella University – Information Security

Kevin Basta
BS, Alexandria University – Mathematics
MS, Alexandria University – Computer Science
PhD, Alexandria University – Mathematics

Mark Bowles
BA, University of Akron – Psychology
MA, University of Akron – History
MBA, University of Phoenix – Technology Management
PhD, Case Western Reserve – History of Technology

James Bowman
BA, Ohio State University – Art
MFA, School of Visual Arts – Computer Art

Heather Chandler
BA, Vanderbilt University – Art History
MA, USC School of Cinema – Critical Studies of Film

Robert Chubbuck
BS, Western Governor's University – Security
MS, Western Governor's University – Information Security Assurance

Jill Coddington
BS, University of Colorado – Mathematics
MBA, University of Phoenix – Business
PhD, The Union Institute – Mathematics

Linda Ericksen
BA, University of Kentucky – English Literature
MA, University of Kentucky – English Literature
MS, University of Oregon – Computer Science and Education

Michelle Giordano
BA, Fairleigh Dickinson University – Communication Advertising

Diane Hamilton
BS, Arizona State University – Business Management
MA, University of Phoenix – Organizational Management
PhD, Northcentral University – Business Administration

David Horachek
BS, McMaster University – Neural Computation
ME, University of Illinois – Software Engineering

Chris Hurley
BS, Angelo State University – Computer Science

Cliff Lasana
BS, University of Advancing Technology – Software Engineering, Game Programming, Game Design

Heather Lunsford
BA, Arizona State University – English
MA, University of Phoenix – Education with Adult Education and Distance Learning
MA, Northern Arizona University – English with Literacy, Technology, and Professional Writing

Jennifer McClure
BS, University of Phoenix – Business Management
MS, Walden University – Psychology

Kevin McLaughlin
BS, Park College – Management Information Systems
MS, Nova Southeastern University – Computer Science; Education

Gregory Miranda
BS, University of California – Computer Engineering
MS, University of Advancing Technology – Technology

Paul Orlando
BA, Harding University – English Language and Literature/Letters
BA, Harding University – Fine/Studio Arts
MFA, Savannah College of Art and Design – Animation/Art

Nan Pendarvis
BA, Northeastern State University – Art & Science Education
MFA, University of Oklahoma – 2D Design & Printmaking

Laura Pogue
BA, University of Michigan – Finance & Marketing
MBA, University of Michigan – Strategic Management
DM, University of Phoenix – Organizational Leadership

Lisa Marie Portugal
BA, Media Art
MA, Education
PhD, Leadership for Higher Education

Carey Richards
BS, Colorado College – Art Studio
MA, Regis University – Animation

Russ Rogers
BS, University of Maryland College Park – Computer Information Systems
MA, University of Maryland College Park – Computer Systems Management

Victoria Schmidt
BA, University of California LA – Film and Television
MFA, Loyola Marymount University – Writing
PhD, California Coast University – Psychology

Todd Spencer
BM, Wheaton College – Percussion Performance
MM, Arizona State University – Interdisciplinary Digital Media and Performance

Mamasa Sumare
BS, Arizona State University – Bioengineering
MS, Arizona State University – Bioengineering

Patricia Tobin
BFA, California State University
MA, California State University
PhD, Capella University – Education: Post Secondary and Adult Education

Jason Turner
BS, Eastern Kentucky University – Statistics; Computer Science
MS, Eastern Kentucky University – Applied Computing: Software Engineering Option
MS, University of Louisville – Computer Science
PhD, University of Louisville – Computer Science and Engineering

Kristi Westphal
BS, Arizona State University – Finance
MBA, Arizona State University – Computer Information Systems

Dave Winstead
Executive Design Officer/Lead Character Programmer, Crunchtime Games
Lead Combat Designer, Atari Games/Midway
Lead Designer/Character Programmer, The Collective

Ellen Wolterbeek
BA, Regis College – English; Communication
MA, Arizona State University – Arts and Humanities

Vicki Yanaga
BS, Arizona State University – Global Business
MBA, University of Phoenix


UNIVERSIT
AND
ADMISSIO
POLICIES

UNIVERSITY POLICIES

The University recognizes that all policies, procedures and programs are dynamic. Policies in this catalog represent the University's approved student policies. University of Advancing Technology makes every effort to be consistent in its policies, procedures, documents and actions. The policies outlined in this catalog and in the student handbook supersede policies listed in any previous catalog or student handbook. In any case where conflicting statements occur between the official University catalog and another official publication, such as a previous year's catalog, the catalog statement in the most recent version will take precedence. The only exception to this rule is the publication of a special supplement or addendum to the catalog. The electronic version of the catalog at **http://www.uat.edu/Catalog** and on the University's Intranet incorporates the most recent supplement or catalog addendum within the body of the electronic catalog.

For each student entering a program at the University, graduation requirements are determined by the catalog under which the student enrolled. Policies governing the University and its student population are published in the catalog in its printed and electronic versions.

ADMISSION POLICIES

All UAT applicants are strongly encouraged to complete the application/enrollment process well in advance of class start dates.

NONDISCRIMINATION

In alignment with our mission and vision, the University considers students, employees, and applicants for admission or employment on the basis of individual merit. UAT strives to provide all members of our community with a work and educational environment that is collegial and free of illegal discrimination or harassment based on race, sex color, creed, religion, age, national origin, disability, marital status, status with regard to public assistance or sexual orientation, or membership in a local commission as defined by law.

UNDERGRADUATE ADMISSIONS REQUIREMENTS—US CITIZENS

University of Advancing Technology strives to admit students who embody our passion for technology, are a cultural match to our University, demonstrate adequate academic achievement, and have a dedication to lifelong learning. All undergraduate applicants are evaluated based on these criteria: academic history and achievements, personal expression, desire to attend UAT, how they might fit within UAT's geek-friendly culture, passion and aptitude for technology, and the supportiveness of applicant's network of family, friends and peers to achieve their educational goals (for UAT-Online applicants, employer support is also evaluated).

All applicants are encouraged to submit high school transcripts, ACT and/or SAT, Advanced Placement scores and college transcripts so that UAT's Office of Admissions may thoroughly review the applicant's academic history.

HOME SCHOOLED STUDENTS

University of Advancing Technology welcomes students from all types of educational backgrounds and encourages home schooled students to apply. Due to the diverse nature of home school requirements from state to state, UAT requires the following materials in order to evaluate a student's academic history for acceptance:

- Transcripts from a nationally recognized and accredited home school program

OR

- Detailed home school transcripts (course titles, brief description of each course content, a grade or performance assessment for each course, details on duration of study, and expected graduation date) and a second academic indicator such as the SAT, ACT, GED, or College GPA (Where 12 or more credits were completed at a single institution)

Please keep in mind that in order to attend at the university, applicants need to demonstrate completion of the equivalent of high school. Home schooled students need to submit documents indicating that they've followed the regulations determined by their State. Other forms of proof of high-school equivalency will be considered on a case-by-case basis, but should be approved in advance by contacting the Office of Admissions at admissions@uat.edu.

UNDERGRADUATE ADMISSIONS REQUIREMENTS—NON-US CITIZENS

If an applicant is not a citizen of a nation where English is the official language, then he or she must provide proof of English proficiency. Documentation of any of the following will show proficiency:

1. Test of English as a Foreign Language (TOEFL) with a score of:
   a. 550 or higher on paper-based test
   b. 79 or higher on Internet-based test
   c. 213 or higher on computer-based test
2. Successful completion of Level 112 from an ELS Center.
3. Attendance for one year at a regionally accredited US college or university and completion of English 101 (or equivalent) with a grade of C or better.
4. International English Language Testing System (IELTS) score of 6.0.
5. Test of English for International Communication (TOEIC) score of 760.
6. Completion of a bachelor's degree or equivalent from an institution where the medium of instruction was English.

One of the above must be satisfied for consideration. Proof of English proficiency is not required if English is the applicant's native language.

All Official transcripts must be submitted with an English translation. In order to determine that a student has received the equivalent of a US High School Diploma or a US Bachelor's degree, UAT may request that official transcripts be evaluated by Educational Credential Evaluators, Inc., P.O. Box 17499, Milwaukee, WI, 53217-0499, USA (http://www.ece.org) or another outside agency.

Federal law requires mandatory health insurance coverage for all international students studying in the United States. International students who will not be issued a visa through UAT and who already have health insurance coverage will need to show proof during their program of study. If a student does not have insurance coverage and would like to obtain it, they may contact the Registrar. Unless a student has provided evidence of insurance coverage, UAT will work with an outside insurance provider and will charge the student's UAT account for provision of insurance during their studies.

International Course Expectation

International students seeking to attend UAT on-campus indicate a desire during their visa application process to experience the interpersonal interactions that are found within on site learning. UAT values the benefits that international students receive when interacting directly with other students and faculty during their education. Therefore, our expectation is that these students attend all of their courses on-campus. International on-campus students may not take online courses.

INTERNATIONAL VISA

UAT takes no responsibility for managing international visas. This responsibility falls to the international students.

APPLICATION

An application for admission must be completed and submitted to the UAT Office of Admissions prior to consideration. Contact the UAT Office of Admissions for the necessary form or complete the online application at **http://www.uat.edu/apply**.

Steps to Apply for Acceptance:

1. Complete the application and send it to University of Advancing Technology, 2625 West Baseline Road, Tempe, AZ, 85283-1056, USA, fax it to (602) 383-8222 or submit it electronically through our website at http://www.uat.edu/apply.
2. To determine if applicants meet the requirements set forth by the University's acceptance criteria, completed applications are forwarded to the Office of Acceptance.
3. Applicants are granted Acceptance, Early Acceptance, Conditional Acceptance, or Provisional Acceptance, or applicants are denied.
4. Acceptance to the University does not guarantee admission. Please refer to admissions requirements.

Acceptance

Acceptance is awarded to students who have met acceptance criteria, demonstrated adequate academic achievement, have completed at least 6 semesters of high school or equivalent or have submitted sufficient ACT or SAT test scores and whose records have been officially verified (i.e., receipt of official academic transcripts and/or official test scores when applicable).

Conditional Acceptance

Conditional Acceptance is awarded to applicants who have completed at least 4 semesters of high school and have provided sufficient information for the Office of Acceptance to determine that UAT's acceptance requirements have been met, but official academic transcripts or ACT or SAT scores have not yet been received.

Provisional Acceptance

Provisional Acceptance is awarded to applicants who have completed at least 4 semesters of high school and have been granted acceptance but with the provision that a 2.0 CGPA must be demonstrated upon the completion of the second semester at UAT. This provision will be lifted once the aforementioned conditions have been met.

Denied

Denied applicants did not meet the University's acceptance requirements. Applicants are eligible to re-apply.

Admission

Prior to matriculating to UAT, a high school diploma from an accredited institution recognized by the US Department of Education, or equivalent must have been earned. In addition, all required enrollment forms must be completed and a deposit on file with the university.

3-DAY CANCELLATION POLICY

A student may cancel an enrollment agreement if the student submits a written notice of cancellation within 3 days, excluding Saturday, Sunday, and state and federal holidays, of signing the agreement. The school shall provide a refund of 100% of all student fees and tuition paid for the student.

No later than 30 days of receiving the notice of cancellation, the school shall provide a refund of 100% of all student fees and tuition paid for the student.

TRANSFER CREDIT FOR PREVIOUS EDUCATION

The University actively seeks to recognize college-level academic work completed by its enrolling students at Department of Education-recognized accredited institutions. All previous coursework must be completed prior to attending UAT to be considered for possible transfer credit. Transfer credit may be awarded for previous college-level courses that a student has successfully completed up to sixty (60) undergraduate credit hours towards a bachelor's degree, thirty (30) undergraduate credit hours towards an associate's degree and fifteen (15) graduate credit hours towards a master's degree. Transfer credit will only be approved for courses that apply to a student's program of study. Students must have attained a grade of C (2.0) or better in undergraduate coursework for credits to be awarded. Graduate-level coursework will be evaluated on an individual basis; credit for electives is limited but direct equivalents will be maximized.

No credit will be awarded for any courses worth less than one credit hour or courses with sub-100-level course codes.

Previous academic coursework and test scores are evaluated by the University upon submittal of unofficial or official college transcripts. It is the student's responsibility to request official transcripts to be sent to the Registrar. Students may use the College transcript Request document, which can be downloaded in PDF form on the Intranet or requested from the Office of Admissions. Although unofficial transcripts may be used to generate a Transcript Credit Evaluation, official transcripts from all previously attended institutions from which credit was awarded must be on file with the Registrar prior to the end of the student's first semester at UAT. Students will be notified via email of the results of their evaluations. Credits will not be made official until the student has enrolled. If the official transcript does not arrive by the end of the first semester and verify the unofficial transcript, awards may be rescinded. A one-time transfer credit fee of $100.00 will be charged to the student's account. Students who switch to another degree program or re-enroll may have a reevaluation of previously awarded transfer credits if the credits were earned prior to the student's original start date. Please refer to the Re- Entry and Degree Change sections for more information.

Grade point averages will be computed based only on grades received for courses completed at University of Advancing Technology. Tuition will not be charged for credits that are approved for transfer credit. Transfer credits will be awarded at the discretion of the University.

Veterans Administration Transfer Credits

Every veteran who applies for educational benefits through the University must provide official copies of academic transcripts from all previously attended institutions for evaluation. Veterans must follow the guidelines for applying for transfer credit outlined in the Transfer Credit for Previous Education section. Enrollment certification will not be completed and sent to the US Veterans Administration (VA) until this step is accomplished. The VA has ruled that all prior education at the post-secondary level must be evaluated by the University and transfer credit granted for applicable courses. University of Advancing Technology will follow the regulations regarding the certification of veterans in compliance with the VA.

Other Transfer Credits

Transfer credit can be obtained from:

- Advanced Placement (AP) exams with a score of 3.0 or better
- International Baccalaureate (IB) exams with a score of 5 or better
- ACE-approved military coursework
- College Level Examination Program (CLEP) exams
- Defense Activity for Non-Traditional Education Support (DANTES) or DANTES Subject Standardized Tests (DSST) exams
- Most Microsoft Corp., Cisco Systems Inc and Computing Industry Technology Association (CompTIA) certifications

Transferring to Other Institutions

In order to transfer college credit to another institution, a student must submit an application to that institution and follow its guidelines. Each institution has its own rules and standards governing the transfer of credit; thus, University of Advancing Technology cannot make any assurances that any other institution will accept its credits or degrees.

START DATES

Students may begin their education at any of three start dates throughout the year. Undergraduate students may begin taking classes in Spring (January), Summer (May), or Fall (September).

COURSE CANCELLATION

Courses are occasionally canceled at the University for a variety of reasons including low or no enrollments, faculty availability or resource needs. If a course is cancelled, academic advisement is provided to students on how to amend their program of study to meet academic goals. Although UAT will provide notifications of closures or time changes as far in advance of a course start date as possible, it is the student's responsibility each semester to verify their course schedule in preparation for the first day of class.

MILITARY POLICY

University of Advancing Technology recognizes the service, dedication and sacrifices made by the men and women serving our nation in the United States armed forces.

As a military friendly university, UAT extends all courtesy and cooperation as US servicemen and women are deployed for duty. UAT Student Services and Financial Aid coordinators assist our US military students through the process of obtaining the time away from classes and options to resolve any account balance on a case-by-case basis.

RE-ENTRY

Withdrawn individuals wishing to return to the University may do so by re-applying for acceptance. Re-entry students (students who have previously withdrawn or been withdrawn from the University) are subject to meeting all admissions criteria prior to being accepted. Additionally, all re-entry applicants must have met Satisfactory Academic Progress at the time of their withdrawal from the University and must also be in good financial standing with the University to be considered for re-entry. Applicable admission fees are charged each time a student enrolls at the university. All initial transfer credit evaluations must be completed by the first semester of an applicant's first enrollment at UAT. Any credits earned between enrollments may be submitted to the University for evaluation of transfer credit and will be awarded at the University's discretion. All transcripts must be submitted for evaluation prior to re-entry in order to receive consideration of transfer credit.

Students choosing to re-enter, who have had more than 180 days pass since their last day of attendance at UAT, will be charged the published tuition rate at the time of their most recent enrollment agreement. Students choosing to re-enter on or before 180-days since their last day of attendance at UAT will be charged the tuition rate of their previous enrollment.

FINANCIAL AID & VETERANS' BENEFITS

The Office of Student Financial Aid is committed to helping students through the entire financial aid process and assisting students in developing a financial plan that best suits their family's needs. To that end, the University participates in the federal Veterans Education Benefits program and the following federal Title IV student aid programs: Pell Grant, Supplemental Educational Opportunity Grant, Work Study, Stafford Loan (for students) and PLUS Loan (for parents). The University also works with private loan lenders to assist students in meeting their educational expenses.

Questions concerning financial assistance programs, consumer information and requests for financial aid forms may be addressed to the Office of Student Financial Aid by calling (602) 383-8228 or (800) 658-5744, or emailing **FA@uat.edu**. Financial aid forms and related information are also available at **http://www.uat.edu/financialaid**.

DISBURSEMENT OF TITLE IV FUNDS

In accordance with the Higher Education Act (HEA), any Title IV or HEA program funds received by UAT will be disbursed to the eligible student's tuition account by the third business day following the receipt of funds. Should a student be deemed ineligible for said funds, those monies will be returned promptly to the source program or lender.

In accordance to U.S. Department of Education requirements, Title IV, HEA loan information for students and parents will be submitted to the National Student Loan Data System (NSLDS) which is accessible by guaranty agencies, lenders, and schools determined to be authorized users of the data system.

VETERANS' CERTIFICATION OF ENROLLMENT POLICY

The University's School Certifying Official will certify student Veterans' attendance with the Veteran's Administration (VA) every semester at the written request of the student Veteran through a Request of Benefits (ROB) form. This certification process is designed to satisfy the VA's objective of

paying benefits only to eligible student Veterans in a an acceptable enrollment status.

STUDENT AFFAIRS

Student Affairs seeks to foster a vibrant student culture while supplying information and services to students throughout their time at UAT. Student Affairs can answer general questions, refer students to the best source of information, facilitate resolution of issues and provide academic advisement in group and individual settings. Student Affairs is available to assist students in resolving personal issues and concerns, including referral to counseling as needed. They also provide detailed academic advisement to enable students to complete their academic programs successfully. Students have access to online and personal resources to collect information about their academic progress.

Students are expected to be proactive in ensuring that their graduation requirements are being met and that sufficient progress is being made toward their intended degree. Students are encouraged to schedule an appointment with Student Affairs if they have questions about their degree requirements. UAT-Online Students are also encouraged to meet with Student Affairs at a minimum of every 18, 36, 54, 72 and 90 earned credit hours.

TUITION POLICIES

TUITION FEES

UAT has adopted a "tuition lock" concept to assist students and their families with the planning of their tuition investment. Future students will establish their tuition rate at the time of their enrollment and will not be subject to any subsequent increases in tuition as long as they remain continuously enrolled at the University.

The current rate of tuition for online undergraduate students is $6,175.

The current rate of tuition for online accelerated undergraduate students is $9,575.

Tuition is subject to change at any time. Additional information regarding tuition rates may be found at www.uat.edu/tuition.

OTHER FEES

The non-refundable seat deposit to accompany the enrollment agreement for graduate and undergraduate programs:

- US Residents $100
- Non-US Residents $250

In addition to the non-refundable seat deposit, non-US Resident students enrolling as International students will also need to remit the following deposits:

- A non-refundable deposit towards insurance of $750
- A tuition deposit (See the Refund Policy for more details) of $1,000.

The transfer credit fee is $100. This is a one-time fee for all transcripts evaluated during the admissions process.

The Synchronic Resource Fee for online students is $150 per semester.

ESTIMATED PROGRAM COSTS

Based on 2013 pricing, subject to annual increases. Assumes 14-semester Bachelor's degree and 7-semester Associate degree for Online students.

Online Bachelor Student	
Tuition	$86,450
Fees	$2,200
Total	$88,550

Online Associate Student	
Tuition	$43,225
Fees	$1,150
Total	$44,275

Assumes 8-semester Bachelor's degree and 4-semester Associate degree for Online Accelerated students.

Online Accelerated Bachelor Student	
Tuition	$76,600
Fees	$1,300
Total	$77,800

Online Accelerated Associate Student	
Tuition	$38,300
Fees	$700
Total	$38,900

PAYMENT

Payment From US Residents

Arrangements for payment of tuition, housing, books and fees must be made before the first day of class. For charges of tuition and fees not covered by Federal Title IV Student Financial Assistance, payment must be made to the Bursar Office no later than 10 calendar days after the start of the semester. A student with a balance at the end of a semester may be subject to withdrawal. Payment can be made on the UAT Intranet by credit or debit card under My UAT>Pay My Balance, by check, money order, or by calling the Bursar office. Degrees, diplomas, certificates, and transcripts will be withheld until all tuition/fees are paid in full.

Payment From Non-US Residents

Arrangements for the non-refundable seat deposit of $250 are due at enrollment. Arrangements for the payment of the balance of tuition and fees must be made before the first day of class. Students failing to do so are subject to withdrawal. University of Advancing Technology does not discriminate unlawfully on the basis of race, religion, color, national origin, age, sex, sexual orientation or disability, in admission to, access to, treatment of, or employment in the programs and activities. Payment can be made on the UAT Intranet by credit or debit card under My UAT>Pay My Balance, by check, money order, or by calling the Bursar office. Degrees, diplomas, certificates, and transcripts will be withheld until all tuition/fees are paid in full.

Military/Veteran Tuition Policy

In order to support its military/veteran students, University of Advancing Technology (UAT) allows Veteran students utilizing related federal benefits special consideration relating to tuition charges when a military student requests a leave of absence (LOA) or student initiated withdrawal. This consideration will eliminate, prorate or postpone their tuition according to VA money received.

Veterans are responsible for understanding their military education benefits and keeping track of their tuition and fees, UAT account balance and VA payments.

REFUND POLICY

Upon a student's withdrawal from University of Advancing Technology, tuition is refunded according to the number of days attended. Students must fill out withdrawal paperwork in order to withdraw from the University. The University withdrawal form is located on the Intranet, or students may make an appointment with Student Affairs to fill out this form.

Students withdrawing from school receive a refund as follows:

Withdrawal Date	Tuition Refund
1 through 7 calendar days	100%
8 through 13 calendar days	86%
14 through 20 calendar days	73%
21 through 26 calendar days	60%
27 through 32 calendar days	46%
33 through 38 calendar days	33%
39 through 44 calendar days	20%
45 through 49 calendar days	6%
After the 49th calendar day	No refund

The Withdrawal Date is defined by the withdrawal policy. All refunds are calculated on the basis of a fifteen (15) week semester regardless of individual course length or course start date. Additionally, students will be billed by the Bursar Office for any balance remaining after earned financial aid is applied to tuition charges.

RETURN OF TITLE IV FUNDS

Federal Student Aid (FSA) funds are awarded to a student under the assumption that the student will attend school for the entire period for which the assistance is awarded. When a student withdraws, the student may no longer be eligible for the full amount of FSA funds that the student was originally scheduled to receive.

If a recipient of FSA grant or loan funds withdraws from the school after beginning attendance, the amount of FSA grant or loan assistance earned by the student must be determined. If the amount disbursed to the student is greater than the amount the student earned, unearned funds must be returned.

Up through the 60% point in each payment period, a pro-rata schedule is used to determine the amount of FSA funds the student has earned at the time of withdrawal. After the 60% point in the payment period, a student has earned 100% of the FSA funds he or she was scheduled to receive during the period. For a student who withdraws after the 60% point-in-time, there are no unearned funds.

UNIVERSITY TRANSCRIPT FEE

Official copies of transcripts may be obtained by making a request in writing. Upon graduation, one copy of official transcripts will be mailed automatically to the student's most current address at no charge. Transcripts are maintained indefinitely by the University.

ACADEMIC CALENDAR FOR 2013-2015

ONLINE ACADEMIC CALENDAR

2013

FALL 2013 ONLINE

Online 1	September 9 - October 13
Online 2	October 15 - November 17
Online 3	November 18 - December 22

2014

SPRING 2014 ONLINE

Online 1	January 13 – February 16
Online 2	February 18 – March 30
Online 3	March 31 – May 4

SUMMER 2014 ONLINE

Online 1	May 12 – June 15
Online 2	June 16 – July 20
Online 3	July 21 – August 24

FALL 2014 ONLINE

Online 1	September 8 – October 12
Online 2	October 14 – November 16
Online 3	November 17 – December 21

2015

SPRING 2015 ONLINE

Online 1	January 12 – February 16
Online 2	February 18 – March 30
Online 3	March 31 – May 4

SUMMER 2015 ONLINE

Online 1	May 12 – June 15
Online 2	June 16 – July 20
Online 3	July 21 – August 24

FALL 2015 ONLINE

Online 1	September 8 – October 12
Online 2	October 14 – November 16
Online 3	November 17 – December 21

HOLIDAYS

HOLIDAYS FOR 2013

New Year's Day	January 1
Martin Luther King Day	January 21
Presidents' Day	February 18
Memorial Day	May 27
Independence Day	July 4
Labor Day	September 2
Founder's Day	September 23
Columbus Day	October 14
Veterans Day	November 11
Thanksgiving	November 28–29
Christmas	December 25

HOLIDAYS FOR 2014

New Year's Day	January 1
Martin Luther King Day	January 20
Presidents' Day	February 17
Memorial Day	May 26
Independence Day	July 4
Labor Day	September 1
Founder's Day	September 23
Columbus Day	October 13
Veterans Day	November 11
Thanksgiving	November 27–28
Christmas	December 25

HOLIDAYS FOR 2015

New Year's Day	January 1
Martin Luther King Day	January 19
Presidents' Day	February 16
Memorial Day	May 26
Independence Day	July 4
Labor Day	September 7
Founder's Day	September 23
Columbus Day	October 12
Veterans Day	November 11
Thanksgiving	November 26–27
Christmas	December 25


ACADEMIC
POLICIES

ACADEMIC POLICIES

INTRANET

UAT's Intranet is the student's online interface to University operations and student life. Students can access news stories about UAT, student journals and discussions, and academic processes, including checking grades and email, going to class and registering for classes. The Intranet can be found at **https://intranet.known-universe.com/**. Students are given access to the Intranet upon acceptance at UAT, and their access to the Intranet will continue for the life of their relationship with the University even after they have become alumni.

PLACEMENT TESTING

The University realizes that placement in the appropriate course level is a component that fosters student success. Placement testing is designed to ensure that students take classes that are an appropriate match to their ability level. Students may demonstrate mastery through an evaluation of previously earned credit in high school and collegiate-level coursework or by passing the designated placement exams.

Incoming students without evidence of English and/or math levels may be required to take designated exams to establish proper course level for registration. In addition to the aforementioned tests, there are additional placement tests available that will allow students to take higher-level classes by replacing the prerequisite course with a successfully completed placement test. Placement exams can only be attempted once.

Students who completed the SAT or ACT tests and received a score of "5" or higher on the essay component may use those official scores to place out of English 060.

Placement out of a course does not override past grades. Formal course credit is not awarded for placement.

REGISTRATION

Undergraduate students will be pre-registered by end of the semester for the upcoming semester's block of courses.

DROP/ADD

Students may drop and/or add courses within the first five (5) business days of a semester in order to meet academic requirements and ensure successful completion of a program of study. A student who wishes to drop or add a course must use the registration tool located on the UAT Intranet to complete the request. Students who do not register by the end of the drop/add period will be withdrawn from the University. Additions to the semester load may not exceed the maximum course load allowed. A student may not use this process to register for less than full-time enrollment. If a course is dropped prior to the fifth class day, the course will be deleted from the student's permanent record. Students may not drop all classes in order to withdraw from the University. Students wishing to withdraw from the University must follow the University's withdrawal procedures. Tuition and refunds for withdrawing students are based on the withdrawal policy and not based within the drop/add policy.

INDIVIDUAL COURSE WITHDRAWAL

Online undergraduate students may withdraw from courses at any time during the first three weeks of the course with the course grade of "W". Students must request a course withdrawal prior to 11:59 p.m. MST on or before the last business day of Week 3. Any requests made after the third week may only be allowed for significant conditions beyond the student's control (e.g. serious illness, documented by a physician's letter), as determined and approved by the Manager of Student Services. Students may not withdraw to less than 6.0 active credits within a semester. The course or an alternative will be rescheduled the next time that course is offered by the university.

REPEATED COURSES

With repeated courses, the University will use the highest grade achieved by the student in the computation of the grade point average. Both the original attempt and the repeated attempt's grade will remain on the student transcript. Repeated courses are considered in Satisfactory Academic Progress (SAP), please see SAP Policy. Repeated courses are also considered specially in counting a student's full time status. The University will count a repeated course towards enrollment status and certain funding sources when a student is repeating a previously passed course for the first time only (i.e., one repetition per course).

INCOMPLETE

A student who, for documented reasons beyond their control, has been unable to complete all work for a course(s) may be granted the grade of incomplete (I). A student must have completed at least 50% of the course materials in order to request an incomplete. Incomplete requests must be submitted no later than 5:00 p.m. MST on the last day of the semester in order to be considered. Incompletes may stay on a student's academic record a maximum of five weeks, during which time the student may coordinate the submission of work designed to finalize the course with the instructor. Students can request additional information from Student Services. Incompletes not resolved by the end of five weeks will be reversed to the original computed grade.

CHANGING DEGREE PROGRAMS

The University understands that students may discover that the degree program they originally began may not truly address the student's desire for lifetime career goals and future endeavors. Therefore, the University will allow students to change degrees.

The Degree Change form, as well as academic advisement, will be provided by Student Services. Students may submit the degree change form at any point during their program. However, depending on course availability, the effective date on the change may be aligned with the next semester period. Students must consult with Student Services regarding the impact of a degree change on their program of study before, or in conjunction with, submission of a Degree Change application form. Students should also consult with financial aid regarding impact on funding eligibility. Students will remain under the original catalog year they enrolled, provided they remain continuously enrolled at UAT. Students who wish to change to a degree that was not offered during their original catalog year must change their catalog year to the most current catalog in order to make the change. Students who have been awarded transfer credit from a previous institution should also refer to the Transfer Credit for Previous Education policy.

MULTIPLE DEGREE POLICY

Students pursuing a concurrent second degree must officially declare their intent to do so with Student Services prior to reaching senior standing (90 credits) to plan their program of study for both degrees. A student must submit appropriate documentation after consulting with Student Services and fulfill the graduation requirements for each degree.

STUDENT CLASSIFICATION (ACADEMIC LEVEL)

All University of Advancing Technology students are enrolled as full-time regular students in a program of learning. University of Advancing Technology equates undergraduate class standing in the following manner:

Freshman	0–23 Credit Hours completed or accepted
Sophomore	24–47 Credit Hours completed or accepted
Junior	48–89 Credit Hours completed or accepted
Senior	90 or more Credit Hours completed or accepted

COURSE LOAD

Undergraduate students enrolled at University of Advancing Technology are required to maintain full-time status. The Provost or designee must approve exceptions to this requirement. However, students may take credits under full-time status if it is their final semester. Full-time status for an undergraduate student is defined as a minimum of 12 credit hours in a single semester. Note that Financial Aid eligibility may be impacted by a reduction to less than full-time enrollment. Undergraduate students registering for courses in a single semester are limited to a maximum of 18 credit hours. Overrides are available for students wishing to take up to 21 credit hours in a single semester. Overrides are granted for those students whose UAT academic record reflects a CGPA of 3.5 or better. However, if a student attempting more than 18 credits in a single semester should fail or withdraw from a course during that semester, he or she will not be eligible for an override on course load in future semesters.

INTERNSHIPS

Internships are considered a supervised, practical experience that is the application of previously learned theory. Internships are available to students in good academic standing who have achieved sophomore standing or higher at the University.

ATTENDANCE

Students are expected to attend and take an active part in all class activities and learning methodologies to obtain the full benefit of the UAT educational experience. If the University is unable to establish that a student is participating in Online courses, the student is subject to Withdrawal from the University.

ACADEMIC BREAKS

An academic break is a natural break in classes between the end of one semester and the beginning of another. During an academic break, students are considered to be in a continuously enrolled status with no negative effects to their good standing or their satisfactory academic progress. Students receiving Veterans Educational Benefits should contact the Veterans Services Coordinator in the Office of Financial Aid for further information regarding potential impact of funding.

COURSE AND INSTRUCTOR EVALUATIONS

Course and instructor evaluations are conducted near the completion of each course at UAT. Evaluations are completed electronically by each student and are utilized as an important resource for curriculum refinement and instructor training. Students are expected to complete evaluations for each course.

GRADING

Students will be awarded a grade for each course according to the following system:

A	=	Excellent (4.0) passing
B	=	Above Average (3.0) passing
C	=	Average (2.0) passing
D	=	Below Average (1.0) passing
F	=	Failure (0) not passing
I	=	Incomplete (I)
W	=	Withdrawal (W)
TR	=	Transfer Credit (TR)
AU	=	Audit (AU)
P	=	Passing (not included in GPA)
NP	=	Not Passing (not included in GPA)
PA	=	Passed by Assessment (not included in GPA; no credit awarded)

The semester grade is a weighted composite of the course grades. A passing grade of D (1.0) or higher is required for courses to be considered as satisfying a prerequisite requirement.

GRADE POINT AVERAGE (GPA)

Each student at the completion of each semester will have attained both a Cumulative Grade Point Average (CGPA) and a semester Grade Point Average. Grade Point Averages are computed using a 4.0 scale as indicated in the University grading policy. Each course's credits are multiplied by the grade received in the course with the result being noted as quality points on the transcript. The CGPA is the result of the total quality points divided by the total attempted credit hours. The semester GPA is the result of each semester's quality points divided by its attempted credit hours. In the case of repeated courses, the University will use the highest grade received in the computation of the student's CGPA.

GRADE DISCREPANCIES

When a student believes his/her grade recorded on the transcript may be incorrect the student should contact the instructor by email. The instructor will respond within 48 hours to the question during the semester or prior to the beginning of classes if the question is submitted during the semester break. The instructor will notify the student of the results of the grade verification request via email. If the student does not hear back from the instructor, the student should directly email Student Services at **studentservices@uat.edu.** Students with questions regarding transfer credit grades (TR) should contact the transfer credit specialist at **acceptance@uat.edu**.

HONORS REQUIREMENTS

UAT confers three levels of Undergraduate Cumulative Grade Point Average (CGPA) based honors to students upon graduation. At the time of their graduation:

- A student with a cumulative GPA of 3.5–3.74 graduates Cum Laude.
- A student with a cumulative GPA of 3.75–3.89 graduates Magna Cum Laude.
- A student with a cumulative GPA of 3.9 or above graduates Summa Cum Laude.

Students who have earned a cumulative GPA of 3.5 or higher at the time of their graduation are eligible for induction into the Alpha Beta Kappa National Honor Society.

LEAVE OF ABSENCE

This policy provides the basis for a defined interruption in a student's program of study and the terms of his or her return. A Leave of Absence (LOA) is considered "approved" or "unapproved" depending upon the conditions of the attendance interruption. Any LOA that does not qualify as an "Approved LOA" will be treated for Title IV purposes as a withdrawal requiring that the institution perform a Return of Funds calculation.

Approved Leave of Absence

In order for an LOA to qualify as an approved LOA the following requirements must be met.

1. The request for LOA must be made in writing and include the reason for the request.
2. The student must indicate a reasonable expectation of returning to attendance.
3. The institution may not assess the student any additional charges for the student's completion of the prior term's course material upon his or her return.
4. The LOA together with any additional leaves of absence must not exceed a total of 180 days in any 12-month period.
5. A student shall resume attendance at the same point in the academic program that he or she began the LOA. If the student returns earlier, the period of the approved LOA does not terminate until the point in the semester that he or she began the LOA.
6. The institution must explain to the student the effect that non return will have on the student's repayment terms for all Title IV disbursements.
7. The student must include a valid, documented reason with the request.

If a student does not return to the school at the expiration of an Approved LOA, the student's withdrawal date is the date the student began the LOA.

Unapproved Leave of Absence

At the discretion of the institution a student may be granted an "unapproved leave of absence" not to exceed 180 days in any 12-month period. All unapproved leave of absences will be treated for Title IV purposes as a withdrawal and a return calculation will be made and the Department notified that the student is not attending the institution. If a student fails to return following an unapproved leave of absence the student's institutional status will be changed to "withdrawn". The institution will explain to the student the effect that an unapproved LOA will have upon the student including the return of funds and the possible exhaustion of the student's repayment grace period.

To obtain an Unapproved LOA a student must comply with the conditions of 1, 2, 4 and 6 of the Approved LOA conditions.

WITHDRAWAL FROM THE UNIVERSITY

A student may initiate a withdrawal from the University at any time. If it is determined that the student does not intend to return to school, UAT may initiate the process to withdraw the student.

Date of Determination

In general, the semester day the student withdrew is the date that the institution determines the following:

1. The student began the withdrawal process required by the University.
2. The student otherwise provided official notification to the University of the intent to withdraw.
3. Or, in the case of a student who did not begin the withdrawal process or otherwise notify the University of their intention to withdraw, the date of determination of the student's withdrawal will be the date the student determines he/she is not returning to classes, no later than 30 days after the current payment period.

Withdrawal Date

A student's withdrawal date is the earlier date of either the date the student requests a withdrawal or the end date of the last attempted modular course.

INVOLUNTARY WITHDRAWAL

University of Advancing Technology is committed to protecting students, staff, and faculty from the risk of physical harm, and preserving the safety of the campus.

This policy applies when a student's actions or statements indicate a threat to the student's own health and/or safety, or a threat to the health and/or safety of others. It should only be used in extraordinary circumstances, when a student is unwilling to request a voluntary leave of absence or withdrawal from the university.

This policy is not intended to apply to situations in which a student engages in behavior that violates the University's Code of Conduct. However, there may be situations in which both the Involuntary Withdrawal Policy and a Code of Conduct violation apply. In all cases, the University shall have final authority regarding the decision and enforcement of the involuntary withdrawal of a student. In addition, the Americans with Disabilities Act (ADA) policy will be considered in the decision, if applicable.

A student may be withdrawn involuntarily, or placed on an involuntary suspension from UAT if the University determines that the student represents a direct threat to the health and safety of himself/herself or others by engaging in behavior which poses a high probability of substantial harm to himself/herself or others or has acted in a manner in conflict with the values of UAT. If a student is involuntarily withdrawn or suspended, the normal refund policy applies. If the student is living in university-sponsored housing, he/she may be required to vacate housing.

Emergency Suspension

The University may take emergency action to suspend a student pending a final decision on whether the student will be involuntarily withdrawn, in situations in which (1) there is imminent danger of serious physical harm to the student or others, (2) there is imminent danger of significant property damage, (3) the student is unable or unwilling to meet with Student Services, (4) the student refuses to complete the mandatory evaluation, if applicable.

In the event emergency action is taken to suspend the student on a temporary basis, the student shall be given notice of the emergency suspension and an initial opportunity to address the circumstances on which the emergency suspension is based with Student Services.

Conditions for Re-Entry

Because this Involuntary Withdrawal Policy applies to cases in which there is a concern about the safety of the student or others, Student Services may require a student who has been involuntarily withdrawn or placed on leave of absence, or has chosen to withdraw or take a leave of absence to be re-evaluated before he/she is readmitted in order to assure that he/ she presents no direct threat to himself/ herself or others. This is in addition to all regular re-entry policies and procedures.

Parent Notification

FERPA laws are upheld by utilizing a student's records release form in determining what information to release to parents. However, in the extraordinary circumstance that a student is involuntarily withdrawn from the university parents will be notified of the decision, even if a records release form is not on file, if the student is a dependent.

SATISFACTORY ACADEMIC PROGRESS

In compliance with Department of Education regulation the University has adopted a policy of satisfactory academic progress which will promote the successful completion of each student's academic program. In order for a student to be eligible for Title IV assistance, the student must meet the following criteria at the evaluation points set forth below. This policy applies to all students whether they are enrolled in a full-time, part-time, graduate or undergraduate program.

Every student's academic progress will be evaluated at the end of every semester.

For a student to meet the standards of Satisfactory Academic Progress (SAP) the student must have a cumulative grade point average at the end of the first semester of 1.4 for undergraduate students and 2.0 for graduate students. The student must have a cumulative grade point average at each evaluation point thereafter of 2.0 for undergraduate students and 3.0 for graduate students.

A student must also demonstrate at each evaluation that he or she is completing course work at a pace that will ensure completion of the program. Consequently, a student must demonstrate at the first evaluation that he or she has successfully completed 50% of credits attempted. At each subsequent evaluation a student must demonstrate that he or she has successfully completed 67% of credits attempted.

All transfer credits that are accepted by the University and applied to the student's program of study will be treated as both credits attempted and credits completed. Incompletes will be treated for SAP in accordance with the University's policy on incompletes but will not be used in the calculation until a final grade is entered. Repeated course work will be treated under the repeated course work policy but all classes taken that have grades will be treated as courses attempted and courses completed. Classes from which the student withdraws under the university individual course withdrawal policy will be treated as credits attempted but not earned.

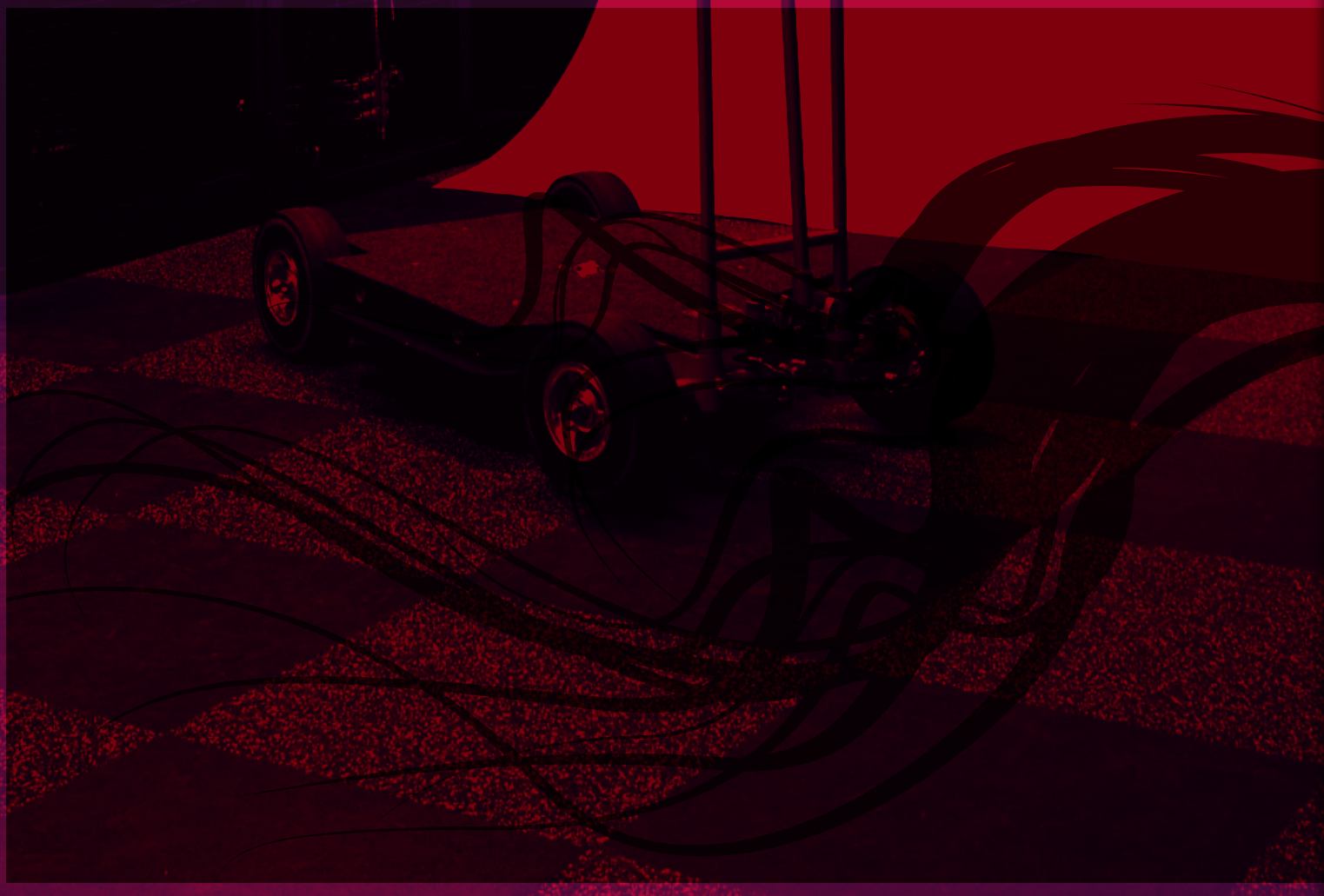
A student who fails to achieve the standards of CGPA and Pace under this policy will be placed on one semester of financial aid warning. A student who fails to achieve standards of CGPA and Pace after one period of financial aid warning will be ineligible to receive any funds under Title IV unless an appeal is granted. Students will be assigned to warning status without right of appeal or requirements of any action on the part of the student. For a student to become eligible for financial aid after being placed in the warning status the student must reestablish compliance with the standards of CGPA and Pace.

The University will notify the student of any result of an evaluation that affects the eligibility of the student for Title IV. This notification will be given within 7 days of any negative determination.

If after being placed on Financial Aid Warning and if at the end of that semester the student fails to achieve a CGPA or Pace that ensures completion within maximum time frame, a decision of the University to place the student in a status of ineligible for Title IV may be appealed by the student. This appeal must be filed with the Office of Student Services within 30 days of any notification of ineligibility. One more semester of funds may be disbursed to the student if following the appeal the institution determines that based upon mitigating factors submitted by the student, the student should be able to meet the institution's satisfactory academic progress standards by the end of the subsequent semester.

In order to appeal a decision of ineligibility a student must submit information as to why the student failed to make satisfactory academic progress and what has changed in the student's situation that will allow the student to demonstrate satisfactory academic progress at the next evaluation.

GENERAL POLICIES



AMERICANS WITH DISABILITIES ACT (ADA)

The Americans with Disabilities Act (ADA) was enacted to extend to otherwise qualified individuals full access to all aspects of public accommodation, including education. The ADA became effective in July 1992 and prohibits discrimination on the basis of disability. The University does not illegally discriminate on any basis and, in fact, welcomes students with disabilities. The college's facilities have been designed with many special accommodations for the physically disabled and the University inventories many special devices for students which are useful in helping accommodate a variety of physical disabilities.

The ADA is a positive piece of legislation and the college readily complies with all of its provisions. As an employer of more than 25 persons and as a public service provider, the ADA affects the college in two areas: employment of Americans with disabilities and the servicing (education/enrollment) of these persons.

To prevent discrimination, educational services must:

- Be provided in an "integrated setting" if possible.
- Make "reasonable accommodations" unless a modification would result in an undue hardship to the institution or a fundamental alteration of the services provided.
- Furnish auxiliary aids and services when necessary.
- Remove architectural and structural communication barriers in existing facilities when readily achievable.
- Provide readers, note-takers and tutors as required.

The University is not required to provide:

- Personal devices such as wheelchairs.
- Individually prescribed devices (e.g., glasses, hearing aids).
- Services of a personal nature (e.g., assistance in eating, dressing or toileting).

Extra charges to cover accommodation may not be made. Auxiliary aids are not required if they would result in an undue burden (significant difficulty or expense) being placed on the school.

Physical barriers must be removed; however, this college has an ADA-compliant facility at this time and significant effort has already been made to make the facility fully accessible. All individuals involved in recruiting, training and serving students must ensure that students be admitted, trained and serviced equally with no discrimination for disabilities. All efforts should be made to find cost effective ways of accommodating students with disabilities. Student Services should be contacted in all cases of disabled applicants, in order that proper attention is paid to finding suitable and reasonable accommodations.

PROCEDURE

Students who are requesting accommodation for a specific disability will provide a written request for accommodations required and appropriate documentation by a qualified medical or disability specialist of their disability when they apply to the University.

Requests for accommodations will be accepted at any time in a student's program of study; however, students must realize that it may take the University a longer time to comply with certain accommodations than others, so alerting the University at the time of admission provides the best service for the student. A student who is currently enrolled in the school should provide the above materials to Student Services when requesting accommodations.

A designated disability committee of the University will determine whether the documentation provided is appropriate and adequate to establish covered disability under the ADA. Student Services will maintain the request and supporting documentation on the student. The University will enter into an interaction with an otherwise qualified individual who has a covered disability with the stated purpose of ascertaining whether there is a reasonable accommodation that is both available and appropriate to enable the student to pursue a fully integrated educational experience. It is not the responsibility or duty of the University under the ADA to reduce or change its academic standards in connection with a request for accommodation, but rather to ensure that an otherwise qualified person with a covered disability receives an opportunity to receive a fully integrated educational experience through the use of reasonable accommodation.

Students who have requested an accommodation from the school and feel that they are being discriminated against should immediately report this to Student Services.

CAMPUS SAFETY

OFFICE OF CAMPUS SAFETY

In addition to the express role of each member of the University community, the University has established an Office of Campus Safety which has as its primary Key Responsibility Area the coordination and promotion of the safest environment possible for all students, faculty and staff. Campus safety is promoted and maintained through diligent observation by the entire community supported by trained safety personnel and deployed safety technology. Access to campus is controlled through a personal identification system applicable to all students and staff. The campus is monitored 24 hours a day by safety officers and a network of security monitors providing additional visual coverage and information for safety personnel.

University of Advancing Technology is a uniquely safe and secure community in a larger urban setting. The University is committed to maintaining this safe and secure learning and working environment for all students, employees and guests. All University students, employees and guests are ultimately responsible for their own personal safety and the security of their belongings. The following safety and security principles are in place to aid the University community in maintaining the safe and secure campus that we enjoy today:

UNIVERSITY SAFETY PHILOSOPHY

The University sees itself as a unique community of technologically sophisticated students and staff that have learned to collaborate and team together to address a myriad of challenges both educationally and professionally. The commitment to safety at the University is based upon a philosophy that the institutional capacities to team and use technology produce results that are superior to simple individualistic approaches. Consequently the safety philosophy is based upon three key elements:

1. Everyone is responsible to be on alert and to identify safety issues
2. Timely warning and communication must be accomplished by well-designed solutions
3. Each member of the University community needs to feel empowered to take appropriate action to maximize safety for themselves and for other members of the community.

These principles are set forth to create a foundation of safety systems that will be designed and employed by the Office of Campus Safety as well as all of the institutional departments of the University. These principles will find expression in the interactions with students, faculty and staff, and ultimately be strengthened by the coordinated efforts of the Office of Campus Safety.

WEAPONS

The possession, display, or storage of weapons is prohibited on all land and buildings owned, leased, or under the control of University of Advancing Technology or its affiliated or related entities, in all UAT owned or leased vehicles-on or off campus, and at all UAT or UAT affiliate-sponsored events and activities, except as provided in Arizona Revised Statutes 12-781. Any person found in violation may be subject to all applicable state and federal laws, University policy, and the Student Conduct Code. UAT students and employees are required to report violations and suspected violations of this policy to UAT Office of Campus Safety, immediately.

Exceptions

1. A certified peace officer performing his or her official duties
2. Any other exception to this policy must be approved by the Director of Organizational Development.

PERSONAL SAFETY AND COMMUNITY AWARENESS

Campus safety requires that students and employees assume reasonable responsibility for their own personal safety. In this regard all students and employees must take common sense precautions to assure the safety of themselves and other members of the University community. Students and employees are encouraged to attend safety and security related events to learn more about personal responsibility and protection. Students and staff should email safety concerns to **safety@uat.edu**.

IF YOU WITNESS AN EMERGENCY SITUATION

If you witness emergencies involving personal safety or property call 9-1-1 immediately and then report the incident to Student Services or the Office of Campus Safety. All other suspicious activity and hazardous conditions should be reported to a designated safety officer on duty. It may also be prudent to contact the Tempe Police by calling the non-emergency phone number: 480-966-6211.

TIMELY WARNING

Integral to the University's Safety Philosophy is the principle that any imminent or sustained danger to the safety of our community must be communicated as quickly and broadly as feasible to give necessary information that will enable students and employees to take reasonable steps to ensure their own individual and collective safety. Warnings must utilize multiple communication paths such as emails, text message, and person to person communication. In addition to the aforementioned, the University, through the Office of Campus Safety, will provide students and employees notice of any sustained or prolonged danger through technological communication channels. The warning by the Office of Campus Safety will contain information necessary to employ all appropriate steps for each member of the community to maximize his or her safety. All incidents must be recorded immediately in the system of record to allow for easy access for review of pertinent information regarding a reported incident.

In the event of an imminent threat to the safety of students or employees all members of the community are expected to utilize the **emergency@uat.edu** email group to communicate the nature and extent of the threat throughout the University email system.

JEANNE CLERY DISCLOSURE OF CAMPUS SECURITY POLICY AND CAMPUS CRIME STATISTICS ACT

In compliance with Federal law, Title 34 CFR part 668.46 the University makes available to students, employees, and prospective students campus crime statistics as required by the Department of Education regulations. Crime Statistics are available at: **http://uat.edu/crimestatistics**.

For more information, the University's current Annual Security Report is available at: **http://uat.edu/annualsecurityreport**. Interested parties may print a paper version of the Annual Security/Fire Report from this link or contact the Office of Campus Safety or a member of Student Services to obtain a paper copy. If you would like a copy mailed to you please include your full name and mailing address with your request by emailing **safety@uat.edu**.

Questions, concerns and comments regarding campus safety should be directed to the Campus Safety Manager at 602-527-5327.

CODE OF CONDUCT

The UAT community consists of students, faculty and staff, all of whom are expected to maintain a high standard of ethics, behavior and purpose. UAT students are important and vital members of this community because they represent the University in all of their personal and public endeavors, both on or off campus. Students carry the obligation to conduct themselves in a manner that is responsible, professional, ethical and beneficial to themselves and other members of the University community. These expectations hold true on campus, in the UAT Residence Life Community and wherever they represent the University in any capacity.

In carrying forth the culture, traditions and values of the greater world community, UAT students shall:

1. Promote and exemplify good digital citizenship and high ethical standards. Infractions of this order include, but are not limited to, illegal hacking, downloading/uploading of offensive material, digital theft or other actions which contradict UAT policies and values, good ethical standards, or local, state and federal laws.
2. Respect differences. The health, welfare, beliefs and intentions of others are not always our own, but we must protect them as if they were.
3. Respect the institutional values of UAT and understand that positive change at UAT occurs through considered, balanced dialogue between students, faculty and staff, as well as the community at large.
4. Respect and engage in different learning and teaching styles and value the pursuit of a lifetime of learning.

5. Promote and embody thinking skills.
6. Promote and embody teamwork.
7. Act with honesty and diligence with respect to their responsibilities to the University and its facilities, including registration, completion of course materials and observance of UAT email policies, which prohibit the sending of mass emails.
8. Abide by UAT's policies related to possession of weapons, illegal drugs or alcohol on school premises or in the UAT Residence Life Community.
9. Prevent or report behavior creating a safety hazard to other persons at the school.
10. Create an environment that is free from disobedient or disrespectful behavior toward UAT staff, students and faculty. Engaging in intimidating, abusive or harassing language or behavior toward fellow students and UAT faculty and staff diminishes the growth and community of others and is therefore prohibited.
11. Exemplify the best forms of citizenship. Criminal activity, including physical or intellectual theft of any type, larceny, fraud, cheating and violations of any local, state and federal laws, will not be tolerated at UAT.
12. Avoid classroom disruption or any type of unwarranted interruption of other students' learning experience.
13. Respect UAT equipment and facilities so that they will be available to other learners. Legal infractions will be referred for prosecution to appropriate law enforcement authorities.
14. Maintain the highest levels of academic honesty. UAT students are part of a community of learning. Therefore, students who engage in actions that are academically dishonest are in violation of the Code of Conduct. Instructors, staff and fellow students are empowered to document and report instances of academic dishonesty. Failure in this area includes, but is not limited to, cheating, deceit and assisting others in the act of performing academic dishonesty and plagiarism. Fraudulent behavior on the part of students with respect to registering for courses or engaging in activities related to completing coursework (tests, assignments, etc.) will not be tolerated.

STUDENT RESPONSIBILITIES

In addition to the codes of student conduct, students who attend University of Advancing Technology are expected to embody the following responsibilities that are closely associated with excellence in collegiate education:

1. Timely attendance, due preparation and active engagement in classes and related learning activities.
2. Timely and regular completion of assigned homework to the best of their individual abilities.
3. Taking personal responsibility, while working closely with the University, for fulfilling all requirements toward graduating in their program of study.
4. Promoting good and timely communication by monitoring and promptly answering all communication from the University, including phone messages, email, personal notification or written communications.
5. Promoting collegiate collaboration by engaging in conversations with instructors in areas of learning, academic difficulty and future goals.
6. Taking personal responsibility for their educational progress by keeping track of grades and assignments and ensuring that all paperwork required by the University is completed on time and turned in to the proper department.
7. Participating promptly in University information gathering systems such as evaluations, surveys and other feedback mechanisms.
8. Taking an active role in the UAT community.
9. Reading and adhering to the Code of Conduct.
10. Observing all policies of UAT as stated in this catalog and the student handbook.

CONSEQUENCES

Students who are found to be in breach of the Code of Conduct Policy are subject to consequences set forth through a University Disciplinary Committee. These consequences will vary based on the type and severity of the Code of Conduct breach. Examples of consequences include mandated counseling, temporary suspension, expulsion from the University, or any other action as deemed appropriate by the Committee. The Committee will be made up of representatives throughout the University and each infraction will be considered on a case-by-case basis.

DRUGS AND ALCOHOL

The Drug-Free Workplace Act of 1988 and the Drug Free Schools and Communities Act Amendments require University of Advancing Technology to adopt and put into effect a program to prevent the unlawful manufacture, distribution, dispensation, possession or use of illegal drugs or alcohol by students and employees on University property or in University facilities, or at University events, and to offer an anti-drug and alcohol abuse program.

University of Advancing Technology is committed to maintaining an environment free of illegal drugs and drug and UAT alcohol abuse. The Drug-Free Schools and Communities Act Amendments of 1989 (effective 9-1-90) require the distribution of the following information to all students and employees.

COLLEGE POLICY ON DRUGS

Sale, use, possession or distribution of prohibited drugs or controlled substances is prohibited in college buildings or grounds, at college sponsored events or in University-sponsored housing. The term "drug" covers all controlled substances as defined in Chapter 34 Arizona Revised Statutes Section 13-3401 to 13-3422 that can be found at **http://www.azleg.state.az.us/ArizonaRevisedStatutes.asp?Title=13**.

Offenders are subject to college discipline, up to and including dismissal from the college or termination of employment and referral for prosecution. An employee convicted of any violation of the criminal drug statutes for activities in or on property owned or controlled by the University, at activities sponsored by the University or in University-sponsored housing must notify his or her manager or dean of the conviction, in writing, within five calendar days of conviction.

OBLIGATIONS OF THE COLLEGE

The University must notify the appropriate federal agency (e.g., Department of Education) of the conviction of any employee or student worker paid in whole or in part by agency funds within ten days of receipt of the notice of conviction. The University must also make a good faith effort to maintain a drug-free workplace, offer drug awareness education, assist students and employees seeking treatment or rehabilitation, notify employees and students of its policy, and implement and enforce the policy.

COLLEGE POLICY ON ALCOHOL

The sale, dispensation or consumption of alcoholic beverages is prohibited on campus or in the UAT Residence Life Community unless specifically authorized at an event approved by the President of the University. In all other cases possession, consumption or distribution of alcoholic beverages is prohibited.

STUDENTS

Compliance with the provisions of the University drug and alcohol policies is a condition of attendance at the University. Violators of these policies are subject to discipline, up to and including expulsion from college, eviction from University-sponsored housing and referral for prosecution.

STUDENT WORKERS

Student workers are subject to discipline, up to and including termination of employment, referral for prosecution or corrective action as the college deems appropriate.

LOCAL, STATE AND FEDERAL LAWS

Campus Open Container Policy

Permission to consume alcohol on University property at a specific event must be requested in writing and granted in writing by the President of the University. For the dispenser of alcoholic beverages, the following provision of the Arizona state law pertains:

Minimum Purchase Age

No person shall sell, deliver, give away, cause, permit or procure to be sold, delivered or given away any alcoholic beverage to someone under, or appearing to be under, the age of 21 years.

The dispenser is obligated to demand proof of legal age whenever in doubt. For the consumer of alcoholic beverages, the following provision of Arizona state law pertains:

False Identification

In Arizona, anyone under the age of 21 years who presents false or fraudulent written identification in order to secure alcoholic beverages is guilty of a criminal offense.

Possession of Marijuana

A person who knowingly possesses or uses marijuana in Arizona is guilty of a felony.

Drinking and Driving

All states prohibit drinking and driving. In Arizona, it is unlawful to operate a motor vehicle if the operator or person in control of the vehicle is impaired in the slightest degree. A person convicted may serve ten days in jail or more and pay a fine of not less than $250.00.

Arizona State Motor Vehicle Law

The rules and penalties for drinking and driving apply to driving a motor vehicle while under the influence of illicit drugs.

COUNSELING, REHABILITATION AND RE-ENTRY SERVICES

Students seeking counseling in college or referral to community services for drug and alcohol abuse should call or visit Student Services.

For additional assistance or counseling, students can contact the following agencies and programs:

Banner Behavioral Health Services
602-254-HELP (4357) - 24-Hour Help

Saint Luke's Behavioral Health Center
602-251-8535/800-821-4193/602-251-8484
1800 E. Van Buren St., Phoenix, AZ 85006

Samaritan Behavioral Health Center-
Good Samaritan Regional Medical Center
602-839-6690
925 E. McDowell Rd., 4th Floor, Phoenix, AZ 85006

Phoenix Interfaith Counseling
480-317-9868
3910 S. Rural Rd., Tempe, AZ 85282

Maricopa Medical Center
Psych. Outpatient Clinic
480-344-2000
570 W. Brown Rd., Mesa, AZ 85201

La Frontera
480-784-1514
Hotline: 480-784-1500
http://lafronteraarizona.org/
1232 E. Broadway Rd., Suite 120, Tempe, AZ 85282
Providing 24 hour telephone intervention to people experiencing suicidal crisis.

East Valley Substance Abuse Center
480-833-8122
1550 E. University Drive, Suite N, Mesa, AZ 85203

Alcoholics Anonymous
Salt River Intergroup
602-264-1341

24-Hour Crisis Hotlines:
800-656-HOPE—RAINN Sexual Assault Hotline (National)
800-SUICIDE—HopeLine Suicide Hotline (National)
480-784-1500—Suicide/Crisis Hotline (Maricopa County)
866-205-5229—Toll-Free Crisis Hotline (Arizona)
480-736-4949—Sexual Assault Hotline (Maricopa County)

FAMILY EDUCATIONAL RIGHTS AND PRIVACY ACT (FERPA)

University of Advancing Technology follows the Family Educational Rights and Privacy Act (FERPA), which provides students certain rights with respect to their education records. Designed to protect the privacy of education records, FERPA establishes guidelines for handling the release of such records.

Specifically, FERPA provides eligible students the right to:

- Inspect and review their education records within 45 days of the day the

university receives a request for access.
- Request an amendment to the student's education records that the student believes are inaccurate or misleading.
- Consent to disclosures of personally identifiable information contained in the student's education records, except to the extent that FERPA authorizes disclosure without consent.
- File a complaint with the U.S. Department of Education concerning alleged failures by the College to comply with the requirements of FERPA.

FERPA protects the education records of students who are currently enrolled or formerly enrolled at the institution. The education records of students who have applied to but have not attended an institution are not subject to FERPA guidelines, nor are deceased students.

Access to student information is allowed to any of the following:
- The student and any outside party who has the student's written request.
- School officials (as defined by the University) who have "legitimate educational interests."
- Parents of a dependent student as defined by the Internal Revenue Code.
- A person in response to a lawfully issued subpoena or court order, as long as the University makes a reasonable attempt to notify the student first.

A student's consent is not required to disclose information in the following instances:
- To school officials (defined in policy) who have a legitimate educational interest.
- To federal, state and local authorities involving an audit or evaluation of compliance with educational programs.
- Relating to student financial assistance - including Federal Student Aid, Veterans' benefits and other funding.
- To parents of a dependent student.
- To comply with a judicial order or subpoena.
- Relating to a health or safety emergency.
- When releasing directory information.
- When releasing the results of a disciplinary hearing to an alleged victim of a crime of violence.
- To organizations conducting studies for or on behalf of educational institutions.
- To accrediting and licensing organizations.

DEFINITIONS

School Official

A school official can be a person:
- Employed by the college in an administrative, supervisory, academic, research, or support staff position (including law enforcement and health staff personnel),
- Elected to the Board of Directors,
- Serving as a student representative on an official committee, such as a disciplinary or grievance committee, or assisting another school official in performing his or her tasks,
- Or a company employed by or under contract to the college to perform a specific task, such as, an agent, an attorney, an auditor, or an outsourced service provider.

Legitimate Educational Interest

A school official has a legitimate educational interest if the official needs to review an education record in order to fulfill his or her professional responsibility.

Educational (Student) Records

These are records that are directly related to a student and are maintained by the educational agency or institute. These records can include, but are not limited to, academic records, financial aid records and placement records.

Directory Information

Directory Information is defined as information contained in an educational record of the student that is not generally considered harmful or an invasion of privacy if disclosed.

UAT has designated the following items as directory information in alignment with FERPA guidelines:
- Student name
- Address
- Personal email address
- Phone number
- Date and place of birth
- Hometown
- Degrees, certifications awards, and scholarships received and dates
- Dates of attendance (current and past)
- Enrollment status
- Participation in officially recognized activities, clubs or sports
- Most recently attended educational institution
- Major field of study
- Academic levels
- Photographs and videos

Students wishing that no directory information be released must submit written notification to the Office of the Registrar at the University campus in Tempe, Arizona: registrar@uat.edu.

RECORDS

In compliance with the Family Educational Rights and Privacy Act of 1974 (FERPA), University of Advancing Technology allows students access to their educational records.

These records include all information maintained by the school which is directly related to the student, with the exception of the financial records of their parents and educational records containing information about more than one student. The University permits access to that part of the record that pertains only to the inquiring student. Student records are confidential and, other than to the student, only such agencies or individuals authorized by FERPA are allowed access without express permission by the student through a records release form. These records are left on file indefinitely. Directory information, however, may be released to valid inquiries unless the student specifically requests in writing that this information not be released.

If a student wishes access to his or her records, he or she should contact the University's Office of the Registrar and complete a written request specifying the desired records. Information on a student's records will be made available

by appointment from the institutional office within forty-five (45) days of the receipt of the written request.

Upon graduation, one copy of student's official transcripts will be mailed automatically to the student's most current address at no charge. Transcripts are maintained indefinitely by the University.

COMPUTER DISCLAIMER

Neither University of Advancing Technology nor our learning management system provider is responsible for lost files, data, homework, email, computer generated graphics or computer projects loaded on the UAT campus network or personal computers. Students are responsible for maintaining current and viable backup material of all of their work on their own media. In addition, the student is responsible for making sure that all assignments are delivered to instructors in a timely fashion regardless of whether the computer network, email or Intranet is functioning properly.

UAT is not responsible for events or conditions, either natural or man-made, occurring externally to the immediate UAT campus environment or as a result of externally produced actions.

WIRELESS NETWORKING DEVICES

University of Advancing Technology will provide support for wireless devices within the confines of the UAT campus for access to the Internet. The support of this technology is to encourage users to use laptops and other electronic devices while on campus, taking full advantage of all of their communication capabilities. Users utilizing wireless technologies are expected to use the tools to assist them in their educational goals and are expected to adhere to all procedures stated in the Student Code of Conduct and other university policies. In addition, the University will provide secure wireless access using the 802.11a|b|g standards to network resources for University administrators, approved staff and university owned equipment.

1. Employees that have been assigned a laptop must have their system's MAC address logged into the secure wireless network and WEP keys installed for access. No laptop or wireless device will have access to the secure wireless network unless the device is owned by UAT.
2. Users only need to have DHCP enabled on their wireless device to gain internet access. Network resources, such as printing or server access will not be available through the public wireless network.
3. Any one using a wireless device for any unethical practice or illegal activity will be subject to the procedures described in the Student Code of Conduct or Employee Code of Conduct.
4. UAT will not be responsible for any damage that may occur to a wireless device due to technical malfunction or misuse of the networking device. The public wireless network is a non-secure unmonitored network. Users are encouraged to ensure they use proper anti-virus software to prevent infection and other security measures to prevent interception of their activity.

LIBRARY EQUIPMENT LENDING

University of Advancing Technology is committed to ensuring resources are available for learning. All equipment that can be borrowed and taken from the library by community members must be borrowed equitably and responsibly by all knowledgeable students and employees regardless of degree or job duties. All University students and employees will be held responsible for any damage to equipment in their care. Ramifications for damage done to equipment may include fines up to the entire replacement cost of the item(s). All university students and employees will also be held responsible for disruptions caused by failure to return equipment in a timely manner. Ramifications for failure to return equipment in a timely manner may include loss of lending privileges for up to one semester. Equipment is to be used for educational purposes and is not intended for commercial purposes.

MASS COMMUNICATION

In order to ensure that communications between University of Advancing Technology, its students and employees are consistent and complete, all communication that is to be distributed to students or employees must adhere to all University policies and procedures. Please refer to the procedures for contacts and procedure for each type of communication.

In order to increase the effectiveness of communication, various communication tools and services are available to both staff and students. Anyone who needs to communicate with staff or students may make requests through the Intranet:

- Text Messaging: University wide text messaging is reserved for marketing purposes and safety concerns only. Marketing is the only department that may send out non-emergency text messages.
- Emergency Communications: E-mail mass mailing is reserved for the UAT President, Provost or their designee, Human Resources, and the Office of Campus Safety. In an Emergency, any student or staff member may email emergency@uat.edu which will be evaluated for further distribution and may be sent to every UAT e-mail address. Emergency text messages may only be sent out by the UAT President, Provost or their designee, regarding any emergency concerns.
- Non-emergency Safety issues: any student or staff may e-mail safety@uat.edu to report a non-emergency safety issue.

All other communication tools not listed here should go through the work order system or other proper channels.

PUBLICITY AND INTELLECTUAL PROPERTY

University of Advancing Technology provides substantial University resources to its students for educational and creative uses. Students retain ownership of the works they create but grant the University a non-exclusive, royalty-free license to use, copy, display, describe, mark-on, modify, retain, or make other use of the student's work consistent with the University's educational mission. The University may use both the student's likeness and the student's work in its marketing, promotional and instructional materials.

Software and other technology resources provided to students are licensed for educational, non-commercial use only. Student work made with University resources cannot be used for commercial purposes under any conditions. Students may not use University resources for any work-for-pay project.

SEXUAL HARASSMENT

University of Advancing Technology is proud of its tradition of having an environment in which all individuals are treated with courtesy, dignity and respect. Every student, faculty member and staff member has the right to experience a professional atmosphere that promotes equal opportunities and prohibits discriminatory practices, including sexual harassment as defined and otherwise prohibited by state and federal law. Sexual harassment in any form by and between faculty members and staff, faculty and staff and students and campus visitors and students or faculty and staff is prohibited at University of Advancing Technology. Violations of the Sexual Harassment Policy may result in disciplinary action up to and including termination of faculty and staff, and in sanctions up to and including suspension or expulsion of students.

DEFINITION OF SEXUAL HARASSMENT

Sexual harassment is unsolicited and unwelcome sexual advances, requests for sexual favors and other verbal, physical or visual conduct of a sexual nature that occurs under any of these circumstances:

1. Submission to such conduct is made either explicitly or implicitly a term or condition of a person's employment or education.
2. Submission to or rejection of such conduct by an employee or student is used as a basis for employment or academic decisions affecting the employee or student.
3. The conduct has the purpose or effect of unreasonably interfering with a person's work performance or otherwise creates an intimidating, hostile or offensive work or academic performance. See 29 C.F.R. 1604.11.

EXAMPLES OF CONDUCT THAT MAY CONSTITUTE SEXUAL HARASSMENT

It shall be a violation of University of Advancing Technology's Sexual Harassment Policy for any employee, student or campus visitor to:

- Make unwelcome sexual advances to another employee, student or campus visitor, including direct or indirect pressure for dates or sexual activity.
- Make requests for sexual favors, whether or not accompanied by promises or threats regarding the employment or academic relationship, including salary, promotion, benefits, duties, grades, assignments, recommendations or any other personnel or academic decisions.
- Engage in verbal or physical conduct of an implicit or explicit sexual nature that either (1) has the purpose or effect of substantially interfering with faculty and staff's ability to do his or her job or a student's ability to learn or participate in a class; or (2) creates an intimidating, hostile, or offensive work or academic environment.
- Commit any act of sexual assault or public sexual indecency against any faculty member, staff member or student whether on campus or in connection with any UAT-sponsored activity.
- Continue to express sexual interest in another faculty member, staff, student, or campus visitor after being informed that the interest is unwelcome. (This includes relationships that began as reciprocal attractions, but later ceased to be reciprocal.)
- Engage in other sexually harassing conduct in the workplace or academic environment, whether physical, verbal or visual, included but not limited to:
    - Commentary about a person's body or body parts.
    - Sexually degrading words to describe a person.
    - Sexually offensive comments, suggestive language, jokes, innuendo or sexually suggestive books, magazines, photographs, cartoons or pictures.
    - Pinching, patting or touching.
    - Wearing of sexually offensive attire.
    - Leering or gawking.
    - Reprisals or threats after negative response to sexual advances.
    - Harassment consistently targeted at only one gender, even if the context of the abusive conduct is not sexual.

GENERAL PROCEDURES

Persons who believe they are being sexually harassed should first notify the harasser that such behavior is unwelcome. A person who continues to be harassed should maintain a record of objectionable conduct in order to help them effectively report their allegations. Verbal reports of sexual harassment must be reduced to writing by either the victim or the persons designated to receive complaints. All reports of sexual harassment shall be promptly communicated by the recipient of the complaint to the appropriate level of management. Faculty, staff and students are encouraged to report complaints of sexual harassment promptly so that a rapid response and appropriate action may be taken. Students should report complaints of sexual harassment to the Student Services department.

WHO IS RESPONSIBLE?

This policy covers all employees and students at University of Advancing Technology. All persons covered by this policy must avoid offensive or inappropriate sexual and/or sexually harassing behavior at work and in the academic environment. Each and every member of the staff, faculty and student body is responsible for ensuring that the workplace and academic environment is free from sexual harassment.

Faculty, staff and students are encouraged to inform perceived offenders of this policy that their conduct is perceived as offensive and unwelcome.

All persons covered by this policy are encouraged to report incidents of sexual harassment in a timely manner. Any form of retaliation against an individual for reporting sexual harassment truthfully to the best of their knowledge or for cooperating in an investigation of a complaint is prohibited and shall be grounds for disciplinary action. Any person covered by this policy who knowingly or recklessly makes a false accusation of sexual harassment is likewise subject to disciplinary action.

PROTECTION AGAINST RETALIATION

Retaliation against a faculty member, staff member or student for filing a sexual harassment complaint or participating in the investigation of a complaint is strictly prohibited. University of Advancing Technology will take appropriate disciplinary action, up to and including employment termination or academic dismissal, if evidence of retaliation exists. Likewise, if UAT learns that the complaint is not bona fide or that a faculty member, staff member or student has provided false information regarding the complaint, disciplinary action may be taken against the individual who provided the false information.

VIOLATIONS OF LAW

An employee or student may otherwise be accountable for sexual harassment under applicable local, state or federal law. Disciplinary action by UAT may proceed while civil or criminal proceedings are pending and will not be subject

to challenge on grounds that court charges involving the same incident have been dismissed or reduced.

STUDENT GRIEVANCE

Students who have concerns, disputes or complaints about an experience at UAT must follow this procedure:

INFORMAL RESOLUTION PROCESS

1. The first stage of the University's grievance process is for the student to bring his/her concerns to the attention of the individual most directly associated with the concern. Through email and face-to-face discussions, most matters can be resolved.
2. If discussions fail to resolve or answer the concern to the student's satisfaction, the student shall then contact Student Services. Student Services will seek to answer and/or resolve the student's concerns.

If informal discussions with Student Services are not sufficient, the formal process will be applied as follows:

3. The student must document and provide specific evidence supporting his/her grievance in writing to Student Services. Using this information, Student Services will work to resolve concerns through investigation, advocacy and any other methods he/she may deem appropriate.
4. If the student is dissatisfied with the resolution provided by Student Services in Step #3 and wishes to seek further resolution of his/her concerns,he/she must then submit a formal grievance to a Student Services coordinator who will record the date of the submitted document and deliver it to the Student Grievance Committee. Any additional documentation can be submitted at this time and must be submitted in writing. The Student Grievance Committee will meet as needed to review submitted concerns. A result of the committee's review may include a period of investigation,but in any case, the Student Grievance Committee will notify a student who has submitted a complaint of its decision within three (3) business weeks of the meeting when the formal complaint was officially submitted. Formal complaints to be considered must contain all of the following elements:
    a. Be addressed to the Student Grievance Committee, UAT, c/o Student Services.
    b. A statement that the document is a formal complaint or grievance.
    c. The specific concerns to be addressed.
    d. Description of all the actions already taken.
    e. Specific evidence supporting the listed concerns.
    f. The student's name, signature, address, phone number and actual date submitted to the committee.
    g. Be submitted in a timely fashion, normally within forty-five (45) days of the occurrence.
5. A student may request a rehearing of the decision of the Student Grievance Committee and appear in person to present his or her grievance. A student desiring a rehearing must file the request for rehearing within thirty (30) days of the committee's original decision.
6. If the student complaint cannot be resolved after exhausting the Institution's grievance procedure, the student may file a complaint with the Arizona State Board for Private Post-Secondary Education. The student must contact the State Board for further details.

The State Board address is:
1400 W. Washington, Room 260
Phoenix, AZ 85007
Phone: 602-542-5709
www.azppse.gov

7. If, after exhausting this procedure, a controversy still exists, it shall be settled by arbitration of the Better Business Bureau in Phoenix, Arizona, or under the rules of the American Arbitration Association, and judgment upon the award rendered by the arbitrator(s) may be entered in any court having jurisdiction thereof.

STUDENT EMPLOYMENT

UAT does not guarantee student employment and does not place students in jobs. UAT's Career Services department is designed to assist students in their job search.


COURSE
CODES
AND
CRIPTION

KEY TO COURSE CODES AND DESCRIPTIONS

Letters used to denote a code prefix designate the topic area or course family associated with a course (refer to Course Category and Code Prefix List for complete listing). Letter codes are arranged alphabetically by Course Category name in the Course Descriptions section of the catalog. Three numbers are employed as a course code suffix and indicate the course's level within its topic area. These numbers range from 100 to 699 (with some exceptions, such as ENG060 or MAT080). Courses numbered between 100 and 299 are considered lower division courses. Courses numbered between 300 and 499 are considered upper division courses. Courses numbered between 500 and 699 are considered graduate level courses. All course numbers below 100 are considered preparatory and do not apply to overall credit hours in a degree program.

Prerequisite(s) indicates progression of courses. **Recommended** indicates courses that are recommended for completion prior to the course being described. Prerequisites are met by completing the foundation course with a minimum passing grade of D (1.0) unless otherwise specified.

All General Education courses are identified within their course description by the notation **GE** and their area (i.e., **Humanities, Mathematics, Natural Sciences, Social Sciences**). For example, the course **ENG101 Composition** is noted (GE, Humanities) because it is a General Education course in the Humanities area.

Credit hour values are listed beside each course name in parentheses, e.g., **(3)**.

Course Category and Code Prefix List

Art	ART
Astronomy	AST
Biology	BIO
Communications	COM
Computer Forensics	CFR
Computer Information Systems	CIS
Computer Science	CSC
Digital Video and Animation	DVA
English	ENG
Game Art and Animation	GAA
Game Studies	GAM
History	HIS
Human-Computer Interaction	HCI
Internships	INT
Law	LAW
Marketing	MKT
Mathematics	MAT
Multimedia	MTM
Network Security	NTS
Network Technology	NTW
Physics	PHY
Professional Development	PRO
Psychology	PSY
Technology	TCH
Visualization	VIS

General Education Categories and Code Prefix List

Humanities

Communications	COM
English	ENG

Mathematics

Mathematics	MAT

Natural Sciences

Astronomy	AST
Biology	BIO
Physics	PHY

Social Sciences

History	HIS
Psychology	PSY

COURSE DESCRIPTIONS

ART (ART)

ART103 Digital Asset Creation (3)
Prerequisite(s): None
This course is an overview of Adobe Photoshop and its application in creating assets for 3D visualization and collateral graphic materials. This course will cover asset creation from scratch as well as the process for using graphics in applications and on the web. The course will examine and apply the basic tools needed to function and design assets.

ART112 Graphic Design Foundational Principles (3)
Prerequisite(s): None
This course combines the application of color theory and introductory design principles. The function of traditional design principles incorporating color perception and color psychology give students a strong understanding of basic visual communication elements. Digital and traditional methods in design, color issues, and media manipulation are covered, along with designing for an ethnically diverse international audience.

ART121 Beginning Drawing I (3)
Prerequisite(s): None
Is drawing a gift that has to come naturally? It is actually a skill like any other. This course will demonstrate how easily it can be learned. Drawing is as much about learning how to see and think about form and space as it is about technique. The drawing part itself is just marks on paper. Those marks come together to tell the viewer something about the world that the artist experienced. Drawing also gives one a deeper understanding of the subject being captured. As students progress through the exercises in this class, they will develop a better understanding of the forms being observed and become more skillful in representing them. Improving drawing skills on paper can improve digital drawing skills. ART121 is an introduction to basic drawing concepts and provides a basic foundation in drawing. The course emphasis will be on traditional compositional theory, drawing principles, fundamentals of observing and describing form. Students will gain a strong understanding of tonal and dimensional perspective.

ART209 Computer Typography and Layout Design (3)
Prerequisite(s): ART112
This course is an introduction to computerized layout and typography principles. The emphasis is on the visual effects of type as a design and communication element. Students will form an understanding of the fundamental rules related to page layout and type design, the study of letter forms and the practical application of these principles through student projects. The primary focus of the instruction addresses typography used in contemporary graphic design applications. Students explore the creation of informative, experimental and expressive typographic forms by using traditional and computer-generated techniques.

ART233 Concept Art (3)
Prerequisite(s): ART112, ART121
Students will learn to sketch, prototype and design functional creations before committing to their actual development. Concept art is a critical skill in increasing the quality and speed of production. Students will learn to craft, present and refine humanoid, animal, biological and environmental concept art that becomes the foundation for future assets.

ART234 Storyboarding (3)
Prerequisite(s): ART121
This course unveils the art of visual storytelling. Storyboarding is an important skill for beginning directors to develop to pre-visualize shots and sets. It is also a critical skill in creating animation sequences and is important to the multimedia developer in planning the needs of a project. Students apply storyboarding techniques to scripts by accurately showing camera angles, placement of the actors, etc. Emphasis is placed on accuracy and presentation.

ART236 Basic Character Figure Drawing (3)
Prerequisite(s): ART121
This course explores a full range of techniques and artistic viewpoints to animate drawings. Emphasis will be on learning to sketch the human and animal forms in both stick and geometric figures studies. Students will learn the skeletal and muscular make up of the figures. Studies in the form of homework assignments will be required as well as in-class work. Long and short poses will be interspersed with exercises specifically designed to allow artists to heighten perceptions. Students will practice using the formulas for making character sketches more realistic by understanding the volumetric description and underlying structure of the human form. This course provides the most thorough experience drawing from live models.

ART240 Figure and Character Sculpting (3)
Prerequisite(s): None
This course offers foundational knowledge of anatomy for artists. An in-depth study of the figure is essential to an artist's understanding of the shapes, both boney and muscular, critical for achieving an accurate representation of surface anatomy. Sculpting the écorché figure in clay and completing numerous anatomical drawings, students develop a deep appreciation and understanding for the construction of the human body, which can be applied critically either directly from nature or their imagination.

ASTRONOMY (AST)

AST301 The Solar System (3)
(GE, Science)
Prerequisite(s): None
Introduction to the field of astronomy for the non-science major. History of astronomy; astronomy as a physical science; properties of light; telescopes; and structure and evolution of the Sun, planets, moons, and other bodies in the Solar System.

AST302 Stars, Galaxies and Cosmology (3)
(GE, Science)
Prerequisites(s): None
Introduction to the field of astronomy for the non-science major. History of astronomy; astronomy as a physical science; properties of light; telescopes; structure and evolution of stars; structure of the Milky Way galaxy and other galaxies; and history of the Universe.

BIOLOGY (BIO)

BIO120 Introduction to Biology (3)
(GE, Science)
Prerequisite(s): None
This course explores the basic issues of living organisms. The material covered emphasizes molecular and organic biology, as well as the structure and function of plants and animals. Learning activities include lectures, group activities and various practical exercises that help students to better understand biology and to use their knowledge in everyday life, as well as in their future careers.

COMMUNICATIONS (COM)

COM226 Communication in Technology (3)
(GE, Humanities)
Prerequisite(s): None
Through the exploration of technology concepts, students will introduce, demonstrate, inform and/or persuade the audience. Effective use of voice, nonverbal skills and visuals will be applied to topics such as robotics, virtual reality, internet speech and privacy, and/or technology ethics. Presentations will be followed by student-led discussions and brainstorming sessions about each technology topic. The art of seeing pros and cons pertaining to controversial concepts will be explored through group discussions. And, students will have the opportunity to create a resume and be formally interviewed for a technology position.

COMPUTER FORENSICS (CFR)

CFR101 Computer Forensic Essentials (3)
Prerequisite(s): None
This course covers the essentials of computer forensic investigations and the evolution of computer forensics. It will explain various modes of attack, examples of cyber crimes, the reasons for cyber attacks, the role of computer forensics in tracking cyber criminals and computer forensics methodologies. The documentation created during this course can be added to the student's portfolio.

CFR105 Understanding File Systems and Structures I (3)
Prerequisite(s): CFR101
A firm grasp of basic file systems and structures is a key to the success of a forensic investigator. This course provides an overview of fundamental file structure concepts. This is the foundation of knowledge for file systems and structures that will be the cornerstone for understanding future forensics courses. The documentation created during this course can be added to the student's portfolio.

CFR106 Understanding File Systems and Structures II (3)
Prerequisite(s): CFR105
An in-depth understanding of file systems and structures is what separates the "tool user" from a true forensic practitioner. This course builds upon fundamentals from CFR105. Advanced topics include server-based partitions, slices, multiple disk volume analysis, and analysis of encrypted drives. This course includes labs with real-world examples and requires both tool use and manual analysis. The documentation created during this course can be added to the student's portfolio.

CFR210 Forensic Tools and Incident Response (3)
Prerequisite(s): CFR105, NTW102
This course covers the analysis of computer incidents from an investigative standpoint. Applied topics include how to isolate systems, recover key files without causing damage or accidental boot-ups, conduct a live analysis, address operating-system–specific issues and the logistics of recovery from data catastrophes or malware infection. Includes discussion and focus on the various types of investigations, including civil, criminal, military and business related (administrative). The documentation created during this course can be added to the student's portfolio.

CFR225 Operating System Forensics (3)
Prerequisite(s): CFR105, NTW216
This course will provide the skills, tools and knowledge necessary to choose the proper tool in order to examine various operating systems. It will explore operating systems from a forensics point of view. Topics covered in this course include examining Windows, UNIX, Linux and Mac operating systems with a key focus on areas of persistence, malware locations and important data locations for each OS. The course will guide students through the popular forensic tools used with each operating system and case examples. The documentation created during this course can be added to the student's portfolio.

CFR227 Malware Detection and Analysis (3)
Prerequisite(s): CFR225
This course provides the skills necessary for students to find, analyze and categorize "zero day" malware compiled for specific attacks/victims. The course uses actual malware and a variety of tools currently used by practitioners. The course focuses on real-world examples of malware utilized by the Advanced Persistent Threat (APT), the affect on the enterprise, and methods for mitigations. The documentation created during this course can be added to the student's portfolio.

CFR230 Investigative Techniques (3)
Prerequisite(s): CFR101
Forensic sleuthing can involve using some highly creative methods to find the evidence in a case. This course will explore the methods that can be used to solve digital forensic mysteries. It will also train students to use sound methods so all evidence collected during an investigation will be admissible and reliable in court.

CFR370 Corporate and Business Issues in Digital Forensics (3)
Prerequisite(s): CFR105
This course covers aspects being dealt with in human resource management (protection/investigation of data related to HR operations), eDiscovery (data collection and attribution for legal processes), and intrusions/criminal activities. Topics will reflect actual issues facing businesses globally utilizing real malware, incidents and tools used by practitioners. The documentation created during this course can be added to the student's portfolio.

CFR410 Network Forensics (3)
Prerequisite(s): CFR101, NTW216
Today's enterprises implement a variety of equipment within their infrastructures. A successful computer forensic candidate must have the skills necessary to understand topologies and protocols. This course will provide the skills, tools and knowledge necessary to identify and gather evidence on a network. The documentation created during this course can be added to the student's portfolio.

CFR420 Advanced Forensics (3)
Prerequisite(s): CFR410
This course covers advanced forensic topics such as router, application and database attacks. Everything needed to complete complex investigations will be explored, as well as advanced data recovery methods. Advanced Forensics will provide the necessary skills to become one of the top computer forensic investigators on the market today.

COMPUTER INFORMATION SYSTEMS (CIS)

CIS100 Beginning Web Design (3)
Prerequisite(s): None
This course provides the foundation for web design by teaching students how to create static web pages and websites. Students will design web pages using the latest underlying concepts such as XHTML and CSS in conformance with current and future Web standards. Students will learn the basics of web page design, usability and accessibility, as well as the fundamentals of HTTP and FTP.

CIS120 Web Design (3)
Prerequisite(s): None
This course looks at current trends, case studies and research on the creation of utilization of Web Design and practices. Students will be immersed in the development concerns, strengths and weaknesses of the social web and social-based websites. Students will take away the concepts of how social media is implemented on the World Wide Web.

CIS210 Linux I (3)
Prerequisite(s): None
This course provides an overview of the commands, utilities and supporting architecture used in Linux operating systems. This course provides the student with skills such as system and application installation, shell scripting, regular expressions, system management, web services installation and maintenance.

CIS240 Building Dynamic Websites I (3)
Prerequisites: CIS100, CSC102
This course builds on the fundamentals of web design and programming, introducing languages and technologies for dynamic and interactive websites. Issues of usability and accessibility will be further explored and assessed. Students will create projects based on the principles of design, using technologies such as PHP, Javascript, advanced CSS and AJAX.

CIS260 Social Media Applied (3)
Prerequisite(s): CIS120, CIS100
This course covers the strength, presence, consistency, and reputation of brand, as well as identifying and evaluating appropriate opportunities for exposure and growth through social networks, media, and channels. Student in the Social Media Applied course will also learn to measure results and outcomes for constant improvement, through numerous tools and services related to the social web. Course topics include but are not limited to: social networks, news, worlds, and sites such as Facebook, Reddit, Tumblr and analytical tools like Hootsuite and Tweetdeck.

CIS327 Mobile Web Initiatives (3)
Prerequisite(s): CIS100, CSC102
The face of the internet is changing with the introduction of connected mobile devices. Embracing this change and building applications based on the wants and needs of multiple audiences is the essence of this course. Working through multiple projects, the student will build applications to address different audiences leveraging the latest mobile web initiatives.

CIS340 Building Dynamic Websites II (3)
Prerequisite(s): CIS240
This is an advanced course in building dynamic websites, incorporating technologies such as database interactivity, XML, advanced AJAX and Javascript frameworks. Students will synthesize previous knowledge to complete complex projects such as web forums or e-commerce sites.

CIS430 Best Practices in Web Production (3)
Prerequisite(s): CIC240, MKT250
Is your website as effective as it needs to be? Does it send the right message? Does it utilize appropriate technologies? Can your prospects ever find it? Who is your audience? Does your online portfolio address your strengths and communicate your unique design to your future employer? This course will address best practices in web design and development, will critique professional sites as well as the students', and will provide specific recommendations to strengthen your site and maximize your investment. The class is also designed to guide students through the processes of creating their own effective online portfolio by identifying strengths and weaknesses of a site, discussing how to approach a web redesign, how to approach site structure and information architecture.

COMPUTER SCIENCE (CSC)

CSC102 Introduction to Programming (3)
Prerequisite(s): None
The purpose of this course is to introduce the fundamentals of computer science and programming to students majoring in this area. Students will become familiar with problem-solving techniques and algorithm development using computers, including a structured high-level programming language. Students will also explore object-oriented programming including the design considerations and conventions used in development of object-oriented applications. Topics will include flow of control, assignment, arrays, functions, and input and output, among others.

CSC202 C# Programming I (3)
Prerequisite(s): CSC102
C# is a general purpose, object oriented programming language suited for all types of development. This course presents the entire language and gives an introduction to the Base Class Library (BCL) to the student. Students will learn the syntax, keywords and constructs, as well as how to leverage the resources of the BCL. This is a projects-based class and students will develop applications with C# using real world tools and practices.

CSC203 Java Programming I (3)
Prerequisite(s): CSC102
Java is a general purpose, object oriented programming language suited for all types of development. This course presents the entire language and the standard libraries to the student. Students will learn the syntax, keywords and constructs, as well as how to leverage the resources of the standard libraries. This is a projects-based class and students will develop applications with Java using real world tools and practices.

CSC208 Introduction to Assembly (3)
Prerequisite(s): CSC215
Working in programming goes beyond high-level languages. It is important to understand the internal logic of computers. The objective of this course is to develop primitive programs with assembly and an understanding of concepts like registers, microprocessor architecture, assembly language programming, I/O considerations, and exception and interrupt handling.

CSC209 Open Source Programming I (3)
Prerequisite(s): CSC102
This course presents an entire open source programming language and the standard libraries for that language to the student. Students will learn the syntax, keywords and constructs, as well as how to leverage the resources of the standard libraries. This is a projects-based class and students will develop applications with an open-source programming language using real world tools and practices.

CSC211 Introduction to SQL (3)
Prerequisite(s): None
This course will introduce students to the commands, architecture and applications of structured query language (SQL). Topics will include access and manipulation of databases, tables, views, indexes, data transformations and internal data structures. Students will create databases, tables, triggers and stored procedures.

CSC215 C/C++ Programming I (3)
Prerequisite(s): CSC102
C++ is a general purpose programming language that supports object oriented programming, and is suited for all types of development. This course presents the entire language and the Standard Template Library (STL) to the student. Students will learn the syntax, keywords and constructs, as well as how to leverage the resources of the STL. This is a projects-based class and students will develop applications with C++ using real world tools and practices.

CSC262 C# Programming II (3)
Prerequisite(s): CSC202 or CSC203
This course focuses on the craft of software. Students will build upon their previously acquired programming and language fundamentals and develop additional skills essential for crafting high quality and maintainable software. This is a projects-based class and students will apply C# and real world tools and practices to solve common programming problems involving advanced object oriented programming with design patterns, shared code (DLLs), graphical user interfaces, multi-threading, network I/O and relational databases.

CSC263 Java Programming II (3)
Prerequisite(s): CSC202 or CSC203
This course focuses on the craft of software. Students will build upon their previously acquired programming and language fundamentals and develop additional skills essential for crafting high quality and maintainable software. This is a projects-based class and students will apply Java and real world tools and practices to solve common programming problems involving advanced object oriented programming with design patterns, shared code, graphical user interfaces, multi-threading, network I/O, and relational databases.

CSC269 Open Source Programming II (3)
Prerequisite(s): CSC209
This course focuses on the craft of software and advanced object oriented programming. Students will build upon their previously acquired programming and language fundamentals and develop additional skills essential for crafting high quality and maintainable software. This is a projects-based class and students will apply an open source programming language and real world tools and practices to solve common programming problems involving shared code, user interfaces, multi-threading, file and network I/O, security considerations and relational databases.

CSC275 C++ Programming II (3)
Prerequisite(s): CSC215
This course focuses on the craft of software. Students will build upon their previously acquired programming and language fundamentals and develop additional skills essential for crafting high quality and maintainable software. This is a projects-based class and students will apply C++ and real world tools and practices to solve common programming problems involving advanced object oriented programming with design patterns, advanced Standard Template Libraries, and dynamic memory management including smart pointers, shared code, multi-threading and network I/O.

CSC308 Mathematics for Theory of Computation (3)
Prerequisite(s): CSC215, MAT220, MAT251
This course explores applied mathematical and scientific computing. Topics include discrete math of sets and Boolean logic, linear algebra (matrix manipulation and solution), differential equations (computational modeling of dynamic processes) and numerical methods (iterative approximation, optimization and error-analysis).

CSC313 Operating Systems Theory (3)
Prerequisite(s): CSC382
This course explores operating system structure and services through the development of an operating system on a complex embedded system. Topics include processor scheduling, concurrent processes, synchronization techniques, memory management, virtual memory, input/output, storage management and file systems.

CSC318 Software Engineering Principles (3)
Prerequisite(s): CSC262 or CSC263 or CSC269 or CSC275
This course introduces formal application development processes. Students will apply a selected Agile-style development process utilizing UP/UML. Students will produce a substantial application produced for real customers by following an Agile-style development process with all of the appropriate documentation. Students will work in teams of no more than 3 people.

CSC330 Mobile Platform Software Development (3)
Prerequisite(s): (CSC202 or CSC203) and CSC275
As the smart phone and mobile device market increases, so does the need for mobile platform software developers. This class will focus on the nuances of developing for mobile systems, including topics such as Android and iPhone development environments, GUI design for mobile devices, messaging protocols and application of streaming data sources.

CSC350 Software Quality Assurance (3)
Prerequisite(s): CSC262 or CSC263 or CSC269 or CSC275
Key aspects of software production are the reliability and robustness of the application. Topics covered in this course include a thorough discussion of the function of the software quality assurance of a software development, the use of metrics, auditing, reviews, standards and audit of configuration management. Students will additionally be exposed to techniques associated with developing code that is efficient and secure.

CSC382 Data Structures and Algorithms (3)
Prerequisite(s): CSC275, MAT250
This course explores the specification and implementation of containers as abstract data types. Structures covered include strings, vectors, stacks, queues, sequential lists, binary trees, hashes and graphs. The course also investigates algorithm design and evaluation, such as sorting, search, recursion and algorithmic analysis. Students will use concepts from calculus within this course.

CSC413 Advanced Software Development I (3)
Prerequisite(s): CSC382 and (CSC262 or CSC263 or CSC269 or CSC275)
This course will introduce students to advanced Web 2.0 development using Open Source frameworks. Extensive use will be made of Object to Relational

Frameworks to store and retrieve data in relational databases in an efficient fashion. Modern JavaScript frameworks such as Scriptaculous or JQuery will be used. Students will use modern continuous integration techniques using tools such as Maven, NMaven, Continuum, etc.

CSC452 Compilers (3)
Prerequisite(s): CSC413
The compiler is one of the most important tools that computer scientists utilize. This class explores the inner workings of compilers through hands-on compiler development. Students will design and construct a working compiler from scratch, exploring concepts of programming language grammars, parsing, code generation and code optimization.

CSC453 Advanced Software Development II (3)
Prerequisite(s): CSC413
This course will extend students' knowledge of advanced Web 2.0 development using Open Source frameworks. Students will build on their current skills by developing loosely coupled applications using Web Services, integration with current mobile development platforms using both browser-based and native mobile applications. Much focus will be placed on the deployment aspects of application development, including performance monitoring, security issues and application monitoring.

CSC471 Parallel Programming (3)
Prerequisite(s): CSC215 and (CSC262 or CSC263 or CSC269 or CSC275)
This course will examine parallel programming techniques needed for multiprocessor shared-memory computer systems. A variety of multiprocessor architectures will be studied to illustrate their effect on program efficiency, including simple multi-threading, Message Passing Interfaces (MPI) and General Purpose GPU architectures. Message passing API, process synchronization and communication using appropriate languages are also applied.

DIGITAL VIDEO AND ANIMATION (DVA)

DVA101 Digital Video Fundamentals (3)
Prerequisite(s): None
This course familiarizes students with digital video production equipment while immersing them in the basic aesthetics of motion picture production. Hands-on projects involve scriptwriting, storyboarding, camera work, continuity, 3-point lighting, sound recording and basic video editing. Students work in groups to complete various technical exercises that familiarize them with terms and equipment while preparing them to produce complete digital video works.

DVA110 Lighting and Environment Design (3)
Prerequisite(s): None
This course introduces the student to the theories and techniques used in lighting and scene design when creating a setting for digital video, animation or game projects. Script analysis and interpretation may be used to teach the principles of style, form and balance in scene design. Lighting subjects include the psychological effects of light and color. Students will be introduced to the basic lighting elements of visibility, selective focus, modeling and imparting mood to a scene.

DVA130 Movie Theory (3)
Prerequisite(s): None
Ever wonder why some movies feel different from others? This class will reveal the secrets. This course introduces the concepts and practices associated with how the written word is translated into visual language. During this course, students will have the opportunity to learn the art and theory behind motion pictures, including how lighting and cameras are used to create emotion, setting and dramatic emphasis. Topics include shooting styles, lighting, camera angles, continuity, composition and cutting techniques. Technical innovations in cameras, filters and lenses will be explored.

DVA241 Digital Video Production (3)
Prerequisite(s): DVA101
Recommended: DVA130, DVA110, DVA238, THE310
Continuing the concepts begun in DVA101, this course introduces students to more advanced digital video production equipment and techniques, and emphasizes the production of complete works. Working in teams, students will produce various projects, including music videos, documentaries and short films, while also exploring additional aesthetic concepts such as depth of field, camera movement, and advanced lighting and sound. A greater emphasis is also placed on the pre-production stage for each type of project.

DVA323 Digital Video Production Studio I (3)
Prerequisite(s): Instructor approval
The future of filmmaking is digital—virtual sets, computer-generated characters and live-action actors photographed on a green screen, all integrated together through matchmoving and compositing. In this course, students bring to bear all their skills in the various areas of editing, camerawork, animation, compositing and more to produce a complete work that exemplifies this new mode of making moving images. This is the ultimate portfolio-building course!

DVA492 Digital Video Production Studio II (3)
Prerequisite(s): DVA323
Recommended: DVA130, DVA238, THE330, (THE310 or THE325)
In this follow-up to Digital Video Production Studio I, students once again produce a complete work that synthesizes all the skills and knowledge acquired throughout their studies. Students in Digital Video Production Studio II serve as the project leads and department heads, overseeing a crew of students in the concurrent Digital Video Production Studio I.

DVA493 Digital Video Production Studio III (3)
Prerequisite(s): DVA492
Recommended: DVA130, DVA238, THE330, (THE310 or THE325)
In this follow-up to Digital Video Production Studio I and II, students once again produce a complete work that synthesizes all the skills and knowledge acquired throughout their studies. Students in Digital Video Production Studio III serve as the project leads and department heads, overseeing a crew of students in the concurrent Digital Video Production Studio I and II.

ENGLISH (ENG)

ENG060 Writing Tools (3)
(GE, Humanities)
Prerequisite(s): None
This course is designed to introduce a variety of factors that contribute to strong, well-organized writing. Areas of focus include the elements of an organized essay—thesis statement, essay organization, transitions, topic sentences, choice of examples and analytical/critical development. The course also covers major grammar errors such as, but not limited to, common sentence clarity such as run-ons and fragments, various types of sentence construction, proper pronoun usage, proper punctuation usage and basic spelling.

ENG101 Composition I (3)
(GE, Humanities)
Prerequisite(s): ENG060 or placement test
This course is designed to present effective techniques in organizing, developing and writing academic essays that reflect a collegiate level of writing. The purpose of this course is to help students write correctly, clearly and thoughtfully. Students will receive an introduction to basic writing, thinking, and reading skills required for success in college, with emphasis on fluency in analytical, rhetorical, and creative non-fiction presentation.

ENG102 Composition II (3)
(GE, Humanities)
Prerequisite(s): ENG101
ENG102 is designed to introduce students to the essential language, theories and strategies of argumentation and research. The purpose of the course is to provide students with the tools necessary to develop arguments for specific audiences within specific rhetorical situations. Students will also develop their critical reading skills: analyzing, evaluating and critiquing the claims and evidence used by various authors. Finally, students will learn proper research skills and write an in-depth research essay/project.

ENG301 Technical Writing (3)
(GE, Humanities)
Prerequisite(s): ENG102
Effective professional communication is critical in the business environment, and can take the form of email, memorandum, user's manual, developer documentation or laboratory report. This course focuses on developing writing skills for technical audiences, emphasizing professional writing style, clarity, and presentation of information. Students will analyze, develop and critique a variety of technical documents in order to practice and understand the role of the technical writer.

ENG305 Mythology, Fable and Fairy Tale (3)
(GE, Humanities)
Prerequisite(s): ENG102
This course will explore various definitions of myth, compare and contrast various mythologies from around the world, and examine the ways myths have evolved over time. We will also study the mythological roots of the fairy tale, compare and contrast fairy tales from around the world, and explore how fairy tales have changed over time.

ENG410 The World of Dune (3)
(GE, Humanities)
Prerequisite(s): ENG102
This course is designed to explore the world of Dune created by author Frank Herbert. Course content covers Herbert's original works, as well as media representations of his works. Most of the course is composed of in-class, Socratic discussion with in-class activities throughout the semester. Students will also complete two written essays/projects over the course of the semester along with some small discussion boards.

ENG415 Selected Topics in Literature (3)
(GE, Humanities)
Prerequisite(s): ENG102
This course is designed to explore a defined area of literature, including individual authors, literary movements, issues in popular culture and various genres. The in-depth study may include works from both Western and non-Western cultures. Contents and methods vary with instructors and from semester to semester.

ENG420 Studies in Tolkien (3)
(GE, Humanities)
Prerequisite(s): ENG102
This course is designed to explore the world of J.R.R. Tolkien. Content covers Tolkien's original works, as well as media representations of his works. Most of the course is composed of in-class, Socratic discussion with in-class activities throughout the semester. Students will also complete two written essays/projects over the course of the semester along with some small discussion boards.

GAME ART AND ANIMATION (GAA)

GAA110 Introduction to Game Art and Animation (3)
Prerequisite(s): ART112, ART121
This course introduces the student to industry-standard 2D and 3D game art and animation for video games. Students will recognize, differentiate, analyze, and create game art assets that are used in 2D and 3D game projects. Areas of emphasis include: game art and design history, sprite animation loops, decals, box modeling, UV mapping, texturing, alpha channels, environments, palettes and fonts.

GAA220 3D Modeling Environments and FX (3)
Prerequisite(s): GAA110
Recommended: ART233
This class will explore modeling game environments and special effects using different industry standard modeling procedures, and will discuss when each is appropriate. Students will study organic and hard surface modeling. Areas of emphasis include: sculpting tools, box modeling, Boolean, lofting, modifiers and deformers. Students will complete exercises that build toward a final project.

GAA230 3D Modeling Characters and Vehicles (3)
Prerequisite(s): GAA110
Recommended: ART234
This course will explore modeling game characters and vehicles using various industry standard modeling procedures, and will discuss when each is appropriate. Students will study organic and rigid surface modeling techniques and pipelines. Areas of emphasis include: Polygon, Sub-division, and NURBS surfaces with sculpting tools, box modeling, extruding, lofting, modifiers and deformers. Students will complete exercises that build toward a final project.

GAA240 Game Texturing (3)
Prerequisite(s): GAA220 or GAA230
This course focuses on the creation of textures for digital games. Students will learn how to create consistent and efficient texture maps from scratch as well as from photo references. Proper mapping and application procedures will also be reviewed. Assignments will help students build their own texture library in order to increase their production speed.

GAA260 User Interface Design (3)
Prerequisite(s): GAA110
This course will cover core concepts of user interface with respect to popular genres within game design. Past, present, and future functionality and interactivity will be examined, their current day application, with an emphasis on current trends for 2D and 3D game interface. Students will prototype and implement their designs into available game engines. *For Virtual Modeling and Design students, this course will satisfy 3 credits towards the ART requirement in the Bachelor of Arts requirement.*

GAA310 Digital Sculpting (3)
Prerequisite(s): None
Game artists are required to generate computer generated textured 3D models that represent objects, characters and other assets. This class teaches students the industry tools and techniques associated with generating digitally sculpted assets for use in high frame rate game applications. Topics include theories and application techniques associated with texture development and the use of digital sculpting software tools.

GAA320 Environmental and FX Animation (3)
Prerequisite(s): GAA220, GAA240
Students will develop capacity in the process of environmental and special FX animation techniques needed for current game animation trends. The utilization of particle systems and game engine import/export strategies will be addressed. The development of common and custom animations for dynamic level objects and game environments will be emphasized. The use of physics-based, dynamic animation systems will also be explored in this course.

GAA330 Characters and Vehicles Animation (3)
Prerequisite(s): GAA230, GAA240
This course will introduce basic rigging and animation principals and techniques for 3D character and vehicle models. Students will learn fundamental rigging and animation toolsets using industry standard tools. Course topics include: Custom bone setup, IK/FK, constraints, and keyframing, looping cycles, and spline animation. Students will rig and animate a character and vehicle which they created in a previous modeling course.

GAA340 Platform Integration (3)
Prerequisite(s): GAA320 or GAA330 or GAA360
Developing art and animation assets for dedicated hardware come with a specific set of challenges requiring game artists and animators to analyze and troubleshoot in different ways for each individual platform. Students will explore techniques to optimize game assets for rendering mechanics, real-time display, memory usage, and image quality and content. The class will explore the balance of these factors on available platforms and development kits. The class will conclude with successful integration of art and animation asset in order to achieve specification and goals.

GAA360 UI Design and Animation (3)
Prerequisite(s): GAA260
This course will build on the student's skills in creating interactive and visually compelling menus and HUDs as seen in today's high-profile titles. The student will script design solutions and problem solve communication issues using industry standard 2D and 3D UI animation software and scripting tools. Assignments will emphasize the visualization and creation of interface transitions with stylish animation.

GAA420 Advanced Game Environment Creation (3)
Prerequisite(s): GAA320
Current AAA games feature amazing environments that drip with atmosphere and stunning interactive details. Throughout this course students will research the latest trends in level modeling, and apply their skills in the development of advanced architectural and organic models needed for current game development. Assignments will lead the student to create a complete game environment that is ready to add to their portfolio.

GAA430 Advanced Character Rigging and Mocap Animation (3)
Prerequisite(s): GAA330
Students will learn the importance of good planning and problem solving as they relate to character design for 3D animation. Course topics will cover: character setup, inverse kinematics, joints and bones, deformers, set-driven keys, bipedal and quadruped setups. Students will be immersed in hands-on motion capture exercises and explore advanced techniques for blending actions and mapping data to multiple characters. Students will create a fully functional character rig and apply animation to it.

GAA440 Advanced Game Character Creation (3)
Prerequisite(s): GAA330
Recommended: GAA340, GAM315
Never in the history of game development have characters and vehicles been so realistic in appearance. Students will explore and apply techniques to create hyper-realistic game characters, creatures, and vehicles used for triple-A titles. Tools come and go; the essence of what makes a great character modeler is artistic knowledge and a critical artistic eye. Anatomy, anthropomorphic creature construction, and automotive design are emphasized during this course.

GAA450 Advanced Materials, Shaders and Lighting (3)
Prerequisite(s): GAA320
Recommended: GAA340, GAM315
Students will explore procedural and non-procedural materials, textures, and shaders as they immerse themselves in the creation of natural surfaces for game engines. Proper lighting techniques for game environments and advanced material shaders will be examined. The application of advanced materials and specialized mapping techniques in order to achieve realistic surfaces for game art assets will be emphasized.

GAA490 Industry Professional Development (3)
Prerequisite(s): GAA340
This course completes the innovative style and generalist/specialist portfolio process providing guidance and structure for the formal presentation of the students work. Students will passionately and clearly articulate their defense of their innovative style and portfolio work through public presentations. Students entering this class are expected to have completed all works included in their portfolio and have their innovation style fully developed for implementation into a reel.

GAME STUDIES (GAM)

GAM101 Introduction to Game Design (3)
Prerequisite(s): None
Whether the goal is to become a game designer, artist or programmer, this course is a path into the world of video game production. Students will explore what career paths lay ahead in the respective areas of game development through an understanding of the game design process and develop awareness of the many positions within the game industry. By learning fundamental design and visualization techniques needed to express complex game ideas, students will apply professional documentation techniques to their projects. Students will also learn how to convert their own game-playing skills to tools used to analyze popular games and break down game play elements to discover what makes the greatest games tick. *For Game Design students, this course will satisfy 3 credits towards the ART requirement in the Bachelor of Arts requirement.*

GAM104 Introduction to Game Programming (3)
Prerequisite(s): None
Recommended for students with little or no prior programming experience. Students will use a scripting language to study the basics of computer programming: variables, data types, looping, conditional logic, functions, arrays, types, and other basic concepts. The ability to explore these concepts prior to learning a more complex language such as C++ allows the student to learn game concepts without a language course and prepares the student for future courses in this program during the first year. Students will gain valuable programming experience by writing simple tutorial-based games.

GAM113 Introduction to Game Tools (3)
Prerequisite(s) None
Game development toolkits are the basis for industry games both casual and large. This course introduces students to working in a toolkit environment by instructing in how games of all sizes and complexities are built within a toolkit. The course also provides practice for students as they using the most foundational tools to build game projects.

GAM125 Introduction to Game Development (3)
Prerequisite(s): None
The process of developing games is an extensive process, and requires developers to understand the many intricacies of development. This course aims to teach the full process of developing a game, from the pre-production stages to the final release and support of a game. The class will cover the basics of production, as well as the various positions and their duties on a game development team. Students will take part in mock game projects where they will attempt to fulfill all the needs of a mock game studio to learn the many parts of the development process.

GAM150 Evolution of Electronic Games (3)
Prerequisite(s): None
This is a critical review of the technology and design history of video games, from the first all-analog machines to the powerful console systems of today. This course will discuss primary innovators and historical figures of the industry and the origins of game design elements such as scoring, risks and rewards, level design, interacting with AI and interface design. Through analysis and example, students will look at the development of the industry, the formation of the classical game genres, the explosion of game-related technology and the possible futures of the field. These design lessons will be applied to simple projects to reinforce how game design elements from three decades ago still shape our industry and its products.

GAM170 Game Design Workshop I (3)
Prerequisite(s): GAM101
This course explores the invention, revision and presentation of game design ideas in an atmosphere similar to a creative writing workshop. Students will work singly and in small groups to develop game ideas, compare and contrast them with published games and then create focused design documents for potential future production. The end product will be several robust, polished game designs that have been tested by the most critical audience—your peers. *For Game Design students, this course will satisfy 3 credits towards the ART requirement in the Bachelor of Arts requirement.*

GAM175 Game Testing and Analysis (3)
Prerequisite(s): CSC102, ENG101
The best game design and technology will fail if bugs, glitches, difficulty and gameplay balance issues mar the final product. As games grow more complex, the role of the game tester has been elevated from entry-level peon to a vital role in the development process, and entire third-party companies are being formed for the outsourcing of game testing. In this course students will learn to analyze, troubleshoot, report and document problems with game technology, controls, balance and ease of use. With an emphasis on clarity, brevity and depth of analysis, students will beta-test student projects and commercial public betas, and produce reports, analysis and suggestions for future improvements.

GAM200 Critical Game Studies (3)
Prerequisite(s): ENG101, GAM101
This course is an introduction to advanced critical techniques and approaches to game design, analysis of games and game theory. Using techniques of critical theory, ludology and semiotics, students will explore the structure of games, interaction with the user and how games balance rules with freedom and risk with reward. The course will also delve into interface design, user control issues, data representation for the gamer and feedback loops. Present and future game genres will be examined and compared and contrasted among different platforms and styles of play.

GAM205 Gameplay Programming Concepts (3)
Prerequisite(s): GAM104 and (CSC215 or CSC202 or CSC203)
Gameplay Programming Concepts teaches students the most important theories and concepts in game programming. Students will be exposed to major game mechanic fundamentals that are expressed in multiple games across several genres. There is a strong focus on analysis and discovery learning. Those taking this class will be expected to observe existing mechanics and attempt to reproduce them both in documentation and in code. The course makes use of an existing game engine in order to focus on gameplay mechanics with the end goal of producing a playable game.

GAM213 Game Tools II (3)
Prerequisite(s): GAM113
This course is a deep dive into the feature set and techniques associated with game development toolkits. Using projects and learning activities that draw from game industry practices, students will build off of the introductory skillsets taught in GAM113 in order to become more proficient with all the features of game development toolkits.

GAM215 Game Scripting (3)
Prerequisite(s): GAM104
High-level scripting languages allow for rapid development, content creation and interactive events, and drive all of today's professional game engines and tools. Used for both game logic and automation of tools, scripting has become a crucial element of game production. Some scripting languages are so well integrated with a given game engine that users can create an entire game with script code. Students will learn one or more scripting languages during this course. Projects will include stand-alone script programs as well as game engine scripting projects.

GAM218 Game Scripting for Designers (3)
Prerequisite(s): CSC102
Game scripting is a basic requirement for the development of games of all genres and sizes. From basic level scripting to AI, games have many layers of high level scripting in them. This course aims to teach how a designer will integrate their scripts into a game, and how they can have a direct impact on the game's direction and play through their high level scripting. Through the class, the students will use multiple scripting languages to directly modify pre-existing games. Game projects will include standalone projects and mods to previous games.

GAM230 Level Design (3)
Prerequisite(s): GAM101, GAM113, (GAM215 or GAM218)
This project-oriented class involves producing game levels for a variety of 2D and 3D engines with a focus on pacing, risks versus rewards, designing for difficulty level and storytelling. Students will create and concept several projects and learn basics of geometry, texturing, lighting and interactive scripting as well as playtesting and optimizing for various engines and environments.

GAM235 Game AI Concepts (3)
Prerequisite(s): GAM113, (GAM215 or GAM218)
Artificial Intelligence is at the core of the modern interactive experience in video games. This course is a survey of the many approaches to creating realistic, interesting behavior from a design point of view, while experimenting with concepts such as pathfinding, sensory systems, flocking, scripted events, heuristics and genetic algorithms. Students will use a variety of tools to create functioning projects that demonstrate class concepts and study various game AI systems and theories.

GAM240 Game Engine Programming I (3)
Prerequisite(s): GAM104 and (CSC215 or CSC202 or CSC203)
This course introduces the fundamentals of game engine programming by customizing and enhancing an existing framework. Students will learn the core concepts of engine programming. Symptoms of taking Game Engine Programming I may include a greater understanding of frame rates, synchronization, timing, 2D and/or 3D graphics rendering, timed animation, user input, multiplayer, physics, collision detection and the most common algorithms used in game development. Many of these fundamentals will be implemented into a working engine from which playable games may be developed.

GAM275 Mobile Game Programming (3)
Prerequisite(s): CSC215 and (GAM205 or GAM240)
Recommended: CSC330
Mobile games are a lucrative industry that is still in a state of rapid growth with tens of millions of users as a potential market for games, all delivered wirelessly on a royalty basis. This course teaches how to develop games for mobile platforms using appropriate languages and toolkits. Students will explore the mobile hardware and learn about the specific techniques and challenges present in developing a game for a small screen and limited user input capabilities.

GAM281 Production Studio I (3)
Prerequisite(s): Instructor approval
The creation of completed games, no matter the size and complexity, is most often pipelined in a studio setting. This class simulates a game production studio and uses applies the principles of prototyping, design documents and pulling together assets, code, platform and testing to produce completed games. Sharing time with students in the upper division of this course Production Studio I students will take on line roles as they apply game design, asset and programming techniques to complete game projects in a learning environment that reflects a production studio.

GAM303 Applied Game AI Concepts (3)
Prerequisite(s): CSC382, CSC215
Quality implementations of artificial intelligence can make or break a game. This course will synthesize the theories and concepts of artificial intelligence with the skills of game programming. Students will program a wide variety of artificial agents utilizing a variety of traditional, modern and theoretical techniques. The student will apply algorithms for pathfinding, strategy, personality and other behaviors. Player interactions with these behaviors will be examined to provide challenging, balanced and enjoyable gameplay.

GAM315 Console Game Development (3)
Prerequisite(s): CSC382 and (GAM205 or GAM240)
Recommended: CSC202, (CSC275 or CSC262) and RBT131
Developing games for dedicated hardware comes with its own set of challenges. This usually requires the game programmer to think in new and different ways. Students will explore techniques to optimize algorithms, memory usage and operations that are often taken for granted. The class will examine the architecture of these systems, the development tools, compilers, and any available libraries and development kits. The class will conclude with a game project.

GAM324 Graphics Programming (3)
Prerequisite(s): CSC382, GAM240, MAT342
Compared to graphics, no other gaming technology has evolved more quickly over the years. With the gaming industry driving hardware manufacturers, today's graphics are preeminently better and literally millions of times faster than systems of only a few years ago. This course covers the basics of 3D graphics systems that cornerstone today's games. Concepts such as cameras, lighting, motion, mesh processing, animation, shaders and particle systems are presented. 3D math theory as it relates to graphics processing and the rendering pipeline are also discussed.

GAM330 Advanced Level Design (3)
Prerequisite(s): GAM230
Having mastered the basics, students in this course will apply level design principles to the creation of entire game environments, interactive elements and objects, storytelling through level design, and texturing and lighting. The emphasis will be on using advanced game engines and their toolsets, and may involve expert topics such as texturing with shaders, cut scenes, scripted events and large-scale environments. *For Game Design students, this course will satisfy 3 credits towards the ART requirement in the Bachelor of Arts requirement.*

GAM341 Game Tools Development (3)
Prerequisite(s): GAM240, CSC275
Recommended: GAM324
A game is only as good as its tool chain. The engine, art, asset management, editors, physics, AI and sound are all tools that create a game. Almost every aspect of game development requires several custom-designed tools. This course teaches fundamentals of tool development. Art tools such as game-specific plug-ins are almost always required. Most of these plug-ins use scripting systems and this course will give an overview of those most commonly-used. Levels used in today's games are often complex and the amount of data itself can be overwhelming, thus the need for efficient data asset management systems for monitoring the integrity of game data. Data asset management methods are covered in both C++ and scripting languages such as Python or Lua. Basic editor creation and image manipulation are also covered.

GAM351 Writing for Interactive Games (3)
Prerequisite(s): ENG102, GAM200
Writing for the interactive environments of current and future video games poses complex challenges that are unique to the field. As the consumer base grows more sophisticated, gamers are demanding complex, believable worlds in which their decisions have an impact. This course explores best practices for creating interactive stories, quests, characters and worlds that flesh out the bare mechanics of game design. Students will create interactive projects and design scenarios with dialog, branching choices, back-story elements and intellectual challenges, as well as look towards the future of game storytelling.

GAM370 Game Design Workshop II (3)
Prerequisite(s): GAM175
This course adds prototyping and building to the creative, peer-driven design practiced in GAM170. Students will workshop several designs and build playable versions of their game ideas in a rapid-development environment, with an emphasis on originality, playability and active revision to the design based on peer feedback.

GAM375 Rapid Game Prototyping and Experimental Gameplay (3)
Prerequisite(s): None
Rapid prototyping is an essential process to developing new game concepts. Prototypes are key to a game company's success, as a low risk solution to experimenting with new, innovative systems and content. This class will teach students how to rapidly develop experimental concepts, and test their feasibility. The class will focus on creating as many small prototypes as possible in the timeframe, educating students on how to reduce time and increase turnover rate in their development process.

GAM381 Production Studio II (3)
Prerequisite(s): GAM281
The creation of completed games, no matter the size and complexity, is most often pipelined in a studio setting. Building upon the previous game studio course, students in this class will take mid level roles, leading lower term students and taking guidance from upper term ones as they apply game design, asset and programming techniques to complete game projects in a learning environment that reflects a production studio. This class simulates a game production studio and uses applies the principles of prototyping, design documents and pulling together assets, code, platform and testing to produce completed games.

GAM385 Casual Game Design (3)
Prerequisite(s): GAM113 and (GAM170 or GAM215 or GAM218)
Accessible, easy-to-play (but difficult-to-master) games are the bridge by which many customers enter the video game market, and an increasingly large pool of gamers make casual games their genre of choice. The casual game must be elementary in design but deep in execution; it must fit the genres and platforms of choice for casual gamers and give both the novice

and the expert a memorable challenge. In this course we'll design, prototype and build casual games that move beyond Tetris and Solitaire clones and advance the genre as a whole.

GAM403 Advanced Game Programming Topics (3)
Prerequisite(s): Instructor approval
Note: A student may take this up to 3 times for credit toward their degree.
This course covers advanced material not generally covered by other courses. Game programming consists of both science and art. The "art" of the process comes by learning advanced concepts and applying them in an efficient, cohesive manner. Students at this level will have learned the fundamentals of several topics. This course allows the opportunity to delve deeper into subjects such as advanced collision detection, game audio, motion planning, advanced AI, ray casting, advanced 3D game programming, physics and new technologies that may become available. Since this course covers a variety of topics with each semester possibly differing from the previous, students are allowed to take this course up to 3 times for credit toward their degree.

GAM404 Applied Game Development (3)
Prerequisite(s): Instructor approval
This course concentrates on techniques to produce a game from the standpoint of production. Students will tackle topics such as people management, team building, communication and workflow in order to grasp the complexities of running a development team. Game teams and projects continue to grow in size and complexity and it is essential to have an understanding of everything involved in game development.

GAM430 Game Productions and Documentation (3)
Prerequisites(s): Instructor approval
The ability to clearly communicate exactly what a game is, how it plays, what it will feel like, how it will look and, more importantly, how a team will get it done are factors that make or break projects at both the pitch stage and during review points in actual development. Whether a game designer, programmer, artist or game production manager, this course will prepare students for the exciting road ahead as a game developer, learning cutting edge techniques for creating and pitching advanced planning and documentation of game projects. Students will ultimately create a game design document representative of professional quality documentation found in leading game studios and master the art of pitching to multiple audiences from team members to executive decision makers.

GAM460 Advanced Gameplay Project (3)
Prerequisite(s): Instructor approval
This comprehensive course brings Game Design, Game Programming, and Game Art and Animation degrees together to synthesize the techniques and skills learned to create a fully realized gameplay project. This course is dedicated toward producing a high quality player experience. Students will set a development schedule and work toward meeting their goals. Aside from game production itself, quality communication and teamwork will be stressed throughout the course.

HISTORY (HIS)

HIS305 20th Century Innovation (3)
(GE, Social Sciences)
Prerequisite(s): None
This course examines the role of technology in the 20th century and how it affects us culturally. Key themes include invention of new technologies and debates over the advantages and drawbacks of industrialization, mass production and information technologies. Students participate in a variety of innovative activities designed to understand the changes that took place socially and economically because of these innovations.

HIS335 Ancient Greek Warfare (3)
(GE, Social Sciences)
Prerequisite(s): None
This course covers the history and influences of Ancient Greece with an emphasis on warfare. The time period and the topics for this course are the Persian Wars through Alexander's campaigns.

HUMAN-COMPUTER INTERACTION (HCI)

HCI101 Introduction to Human-Computer Interaction (3)
Prerequisite(s): None
This course will cover some of the core concepts in HCI relating to users and technology use. These include the notions of the interface, interactivity and interaction. Traditional ways of characterizing these aspects of the relationship between technology and users will also be examined in terms of various usability aspects.

HCI102 Human Factors (3)
Prerequisite(s): HCI101
This course will focus on human physical and cognitive capacities and how an understanding of them should inform the design of such everyday things as tools, information displays and computer software design. Among other topics, it will discuss the interaction of humans with computer systems, a domain generally known as Human-Computer Interaction. The goal is to help students learn and apply cognitive science theory and principles to increase the convenient use of man-made objects and systems, to reduce errors, and to increase productivity and improve safety by using such tools and systems.

HCI250 User Experience Design and Testing (3)
Prerequisite(s): HCI101
Often developers overlook the importance of the customer experience when using their products. As a result, it is becoming increasingly important for companies to provide customers with positive user experiences through fundamentals like navigation, search, usability and identifying the needs of the real user as well as that of the business. This course teaches students user experience design process from start to completion using appropriate design patterns, developing user personas, conducting usability evaluations within the cultural context, and producing prototypes for further design research.

INTERNSHIPS (INT)

INT350 Internship (3)
Prerequisite(s): Sponsor approval
An internship is considered a supervised, practical experience that is the application of previously learned theory. Employers/sponsors work with the student to meet specific objectives and/or learning goals and provide special mentoring or networking opportunities. In exchange, the intern helps the employer/sponsor in meeting overall work goals for the agency/company. Students completing 3.0 credit internships must work a total of 150 hours, or 10 hours per week for 15 weeks.

LAW (LAW)

LAW370 Legal Issues in Technology (3)
Prerequisite(s): ENG101
This course addresses typical legal and business issues in the multimedia field. Rights granted under copyright, principles of fair use, trademarks, intellectual property law, trade secrets, unfair competition, disclosure and privacy laws are covered. Students explore these legal topics with focus on electronic media.

LAW480 Forensic Law (3)
Prerequisite(s): LAW370
This law course provides the foundation of legal knowledge required to enter the world of technology-based forensics investigation. Case studies are geared at illustrating the legal implications of working in the forensics field. The legal topics include eDiscovery best practices, discerning what is acceptable in a court of law, how to appropriately store and handle the evidence and how to communicate with a nontechnical audience. The documentation created during this course can be added to the student's portfolio.

MARKETING (MKT)

MKT250 Online Marketing Environments (3)
Prerequisite(s): CIS120
Students explore a comprehensive approach to Internet marketing, opportunity, and measure, as well as correlate appropriate marketing strategies with marketing channels in this course. Online Marketing environments delivers a strong foundation in brand presence and strengthening, website design principles, search engine marketing (SEM), Social media networks, and mobile advertising. Students learn practical business strategies, promotion, performance evaluations, and improvement opportunities as they relate to marketing and advertising.

MKT330 SEO and Applied Online Marketing (3)
Prerequisite(s): MKT250
Students gain an applied understanding of Internet marketing approaches, opportunity, and measure, as well as correlate appropriate marketing strategies with marketing channels. The SEO and Online Marketing Applied course thoroughly examines brand presence and marketing for social media, search engines, blogs, affiliate, email, and mobile devices. Course participants receive an in-depth education in search engine optimization (SEO) and search engine marketing (SEM). Elevated topics include landing page design, meta-tags, anchor text, keyword development, image optimization, local search, conversion tracking, and link building, designed to increase relevant consumer traffic. This course also teaches performance evaluation and response through web analytics and site data reporting. Students distinguish the various metrics to identify areas of improvement, expand strengths, and define campaign success.

MATHEMATICS (MAT)

MAT080 Introduction to Algebra
(GE, Mathematics)
Prerequisite(s): None
This course is the study of the axioms and methods associated with college algebra. The course covers diverse topics including solving linear and higher order polynomial equations, the analytic geometry of lines, polynomial factorization, solving systems of linear equations in two and three variables, rational and radical equations, the analytic geometry of conic sections, function theory and transcendental functions.

MAT155 Mathematics Appreciation (3)
(GE, Mathematics)
Prerequisite(s): None
"Great Ideas" of mathematics are presented to impact how the student views the world. Topics including number, sequence, pattern, algorithm, chance, systems theory, complexity and simplicity are explored in a variety of contexts. Biographical, historical, and philosophical accents in mathematics are etched into the course.

MAT174 College Algebra (3)
(GE, Mathematics)
Prerequisite(s): MAT080 or placement test
Relations and functions types are developed thoroughly with their graphs. Function types include polynomial, rational, radical, exponential and logarithmic. Conic relations are developed thoroughly. Other topics include systems of equations and inequalities, matrices, and sequences. Application relevance and appreciation are evolved through a discovery math lab component using technology.

MAT179 Pre-Calculus (3)
(GE, Mathematics)
Prerequisite(s): MAT174 or placement test
Introduction to Trigonometry with associated functions and graphs is the primary focus. Modeling is explored using trigonometric functions. Modeling and curve fitting are further explored using functions developed in College Algebra. Application relevance and appreciation are evolved through a discovery math lab component using technology.

MAT220 Statistics (3)
(GE, Mathematics)
Prerequisite(s): MAT174
This course presents the student with basic statistical concepts and methods. This course introduces descriptive and inferential statistics including elementary probability, linear regression and hypothesis testing. MATLAB will be used to emphasize theory and in applications problem solving.

MAT250 Calculus I (3)
(GE, Mathematics)
Prerequisite(s): MAT179
This course is the study of single variable differential calculus. Emphasis is placed on differentiating elementary functions and solving application problems. MATLAB will be used to emphasize theory and in applications problem solving.

MAT251 Calculus II (3)
(GE, Mathematics)
Prerequisite(s): MAT250
This course continues the study of single variable calculus. Emphasis is placed on anti-differentiation, numerical interpretations of the integral and the use of the integral in application problems. MATLAB will be used to emphasize theory and in applications problem solving.

MAT342 Linear Algebra (3)
(GE, Mathematics)
Prerequisite(s): MAT250
This course serves as an introduction to linear algebra. It includes the study of systems of linear equations, matrix algebra, vector spaces, linear transformations, eigenvalues and eigenvectors. MATLAB will be used to emphasize theory and in applications problem solving.

MULTIMEDIA (MTM)

MTM125 Introduction to 3D Studio Max and Maya (3)
Prerequisite(s): None
As tools for game and digital artists, 3D Studio and Maya are widely used to create models, render them and ultimately animate them. This course provides students with a foundational overview of these industry 3D modeling and animation tool systems. Students will use this baseline knowledge as a launching place for later coursework that more deeply explores specific techniques and applications of 3D Studio Max and Maya.

MTM213 2D Vector Animation (3)
Prerequisite(s): ART112
Students will learn techniques in animation using vector-based software such as editing symbols and instances, Flash vector drawing tools, staging, frames, motion and shape tweens, layers, foregrounds and backgrounds. Emphasis will be placed on the design, process and execution of Flash-based movies through the use of crisp graphics, animation and sound.

MTM235 Digital Illustration (3)
Prerequisite(s): None
This course is an overview of the primary industry software tool (Adobe Illustrator) used in the creation of 2D computer graphics. Students will learn the commands and interfaces of industry-standard vector graphics software applications in order to create and manipulate 2D images.

MTM307 Advanced Photoshop (3)
Prerequisite(s): ART103
This course will take the student beyond the skills studied in the 2D Digital Graphics course. For those interested in pursuing a career in graphic or web design, it is necessary to gain experience using a graphical program such as Adobe Photoshop. Graphic design requires both artistic and technical skills in order to produce professional, technology-ready publications. By the end of the course, students will have extensive experience using Photoshop, including knowledge of the tools for photo retouching and enhancing photographs, painting tools and composite design using advanced knowledge of masks and channels. Students will also have created portfolio-level work.

MTM315 AS3 Web Application Development (3)
Prerequisite(s): CIS100, MTM213
This course will introduce the students to web application development using advanced Flash techniques and Flash ActionScript (AS3). This will allow students to create interactive projects and to distribute application over the Internet. Dynamic content generation and distribution will also be an area of emphasis.

MTM330 Production Studio I (3)
Prerequisite(s): None
How are media assets prepared and delivered in a production environment? What are the file formats used for different distributions, how does a production pipeline function and how is client specification and review navigated by those generating and delivering product? Students will be introduced to these issues and techniques through projects in a learning environment that reflects a production studio.

MTM430 Production Studio II (3)
Prerequisite(s): MTM330
This course continues upon the Production Studio I. Students will work in a production studio environment and learn through simulation issues of translating client requirements into complete digital 2D, 3D, animated and web assets. Students will create works that are both stand alone and part of larger campaigns.

NETWORK SECURITY (NTS)

NTS201 Security Essentials (3)
Prerequisite(s): NTW102
The goal of this course is to provide network administrators with the knowledge to design and implement an effective security strategy in a competitive corporate networking environment. This course will explore security-by design utilizing anti-virus tools, security policies and practices, password management, risk analysis and assessments, network vulnerabilities, enhancing security through cabling and network hardware, understanding different types of firewalls, packet filtering and NAT, setting up and securing a VPN, and understanding contemporary hacker exploits. The documentation created during this course can be added to the student's portfolio.

NTS225 Programming for Hackers (3)
Prerequisite(s): None
Security professionals are required to have programming skill sets unique to this industry. This course presents the scripting and compiler programming techniques relevant to securing and exploiting networks, hardware, applications and operating systems. Current hacker and defender techniques from the field inform what students will encounter within this course.

NTS235 Security Applications (3)
Prerequisite(s): None
Keeping up with the state of the industry when it comes to applications and security appliances is extremely difficult. This course surveys the major network security related applications currently used to diagnose, trace and secure networks.

NTS310 Social Engineering (3)
Prerequisite(s): NTS201; TCH301
Have you ever fallen victim to a phishing scam? Why are these scams so successful? Scams are based on specific attributes of individual decision-making processes known as cognitive biases or "bugs in the human system." Social engineering is developing the art of persuasion to gather confidential information from individuals that would normally not disclose this data. A successful social engineer does not need to solely rely on hard technical skills to access information systems. This is a project-based course that will provide examination of historical exploits and develop the necessary skills to successfully use the art of social engineering to access confidential information in a corporate environment and develop defense measures.

NTS325 Exploit Development (3)
Prerequisites: NTS225
In order to be adept at securing systems, defenders need to understand the techniques used to penetrate them. This course teaches students the techniques used to exploit systems and gives them opportunities to practice developing and deploying exploits within offline and controlled environments. As a part of their penetration testing training, students will learn the techniques used to secure systems from the exploits that they create and compare these to industry case studies.

NTS330 Applied Exploits and Hacking (3)
Prerequisite(s): NTS201, TCH301
When discussing practical network security, we must acknowledge that all systems have vulnerabilities. This course combines the fundamental and historical perspective of hacking methodologies and applied hands-on skills. Hacking topics are explored in order to examine the current systems associated with these vulnerable points. This is an applied hands-on course requiring the use of a variety of modern operating systems. Typical walkthroughs explore the standard hacking methodologies such as discovery, footprinting, targeting, attacks, penetration, escalation of privileges and maintaining access. Technical feedback is provided on appropriate means for countering each step of this common methodology.

NTS350 Network Security Monitoring (3)
Prerequisite(s): NTW375
Explore the world of Network Security Monitoring (NSM) and packet analysis. Network security monitoring takes a step past standard intrusion detection models and collects the full spectrum of data types (event, session, full content and statistical) needed to identify and validate intrusions on contemporary network infrastructures. This course will examine typical network security monitoring hardware, tools, design and deployment. Standard vulnerability packet analysis scenarios will provide an in-depth appreciation of monitoring corporate-level networking environments.

NTS370 Shell Scripting for Hackers (3)
Prerequisite(s): NTW102, NTS201
The goal of this course is to provide network security students with a solid foundation in creating shell scripts and basic programming concepts within UNIX/Linux, specifically to aid in security related tasks. This course explores the creation of scripts to manage large amounts of security-related data and automate normal active security operations. Students will write shell scripts to manage, correlate and analyze security logs; pass variables from one security application to another in order to continue a flow of security activities; and to automate and simplify security related tasks and processes. The scripts and programs created in this course can be added to the student's portfolio.

NTS405 Incident Response (3)
Prerequisite(s): None
Although network teams possess the tools needed to secure their infrastructures, they often lack the skills for managing the incident response process. This course provides students with the skills needed to create processes for appropriately responding to security incidents. Students will learn to evaluate at what point are computers shut down and the organization disconnected the Internet. Students will learn to analyze when is it best to let the intruders continue, so we can further determine their motivations, or goals? These processes are critical to ensuring that an incident doesn't create greater organizational damage.

NTS415 Network Defense and Countermeasures (3)
Prerequisite(s): NTS330, NTW216
The Network Defense and Countermeasures course is the art of fencing for network protection. This course covers designing a network defense, security policies, choosing and designing firewalls, configuring firewalls (demos and research), setting up VPNs, Intrusion Detection System overview and design, honey pots, and behavior-blocking software. Additionally, this course will provide solutions for identifying, assessing and preventing external and internal threats to your network in a multi-vendor environment.

NTS426 Reverse Engineering (3)
Prerequisite(s): NTS225 Programming for Hackers
Reverse engineering of system viruses, exploits, intrusions or other means of disrupting systems and network operation is a highly relevant ability for information security professionals. Building from prior coursework in programming and exploit development, this course exposes students to researching and reverse engineering threats to computer and information systems and assets.

NTS435 International and Federal INFOSEC Standards and Regulations (3)
Prerequisite(s): NTS201
This course is an overview of the world of federal and international information security standards that guide the way organizations are doing business today. Research and analysis are conducted on how US security regulations vary from industry to industry, including healthcare, education, military, federal organizations, utilities and financial organizations. International security standards will also be reviewed in order to understand the impact of implementing appropriate information security mechanisms in a global organization. The documentation created during this course can be added to the student's portfolio.

NTS442 Collegiate Cyber Defense Competition (3)
Prerequisite(s): Instructor approval
This course prepares students for a competition that specifically focuses on the operational aspect of managing and protecting an existing "commercial" network infrastructure. Not only do students get a chance to test their knowledge in an operational environment, they will also get a chance to network with industry professionals. The documentation created during this course can be added to the student's portfolio. Due to the changing nature of the challenges, this course can be taken twice and credits received both times toward the appropriate degree.

NTS445 Incident Response and Management (3)
Prerequisite(s): NTS330, NTW216
This course addresses how to react to adverse conditions in a networked world. The procedures for proactive and planning techniques that help ensure that appropriate reaction occurs during a system breach are conveyed. The course includes common detection techniques utilized in the business world, along with detailed information on risk management and best practices for reacting and responding to a system or network compromise. The documentation created during this course can be added to the student's portfolio.

NTS465 Security Evaluation and Assessment Methodology (3)
Prerequisite(s): None
The course is based on the National Security Agency's (NSA) Information Security (INFOSEC) Evaluation Methodology (IEM), which is NSA's recommended methodology for evaluating an organization's technical security. The course will examine the process of coordinating with the customer, setting the scope of the project, obtaining legal authorization, conducting the ten baseline activities of the evaluation, and compiling a meaningful and understandable final product for the customer. Students registering for this course will be required to participate in an actual IEM based evaluation as a course project. The documentation created during this course can be added to the student's portfolio.

NETWORK TECHNOLOGY (NTW)

NTW102 Foundations of Network Engineering (3)
Prerequisite(s): None
This course will lay the foundation on which to build a working knowledge of network engineering. This introductory class will provide a comprehensive overview of how modern networks operate. Topics will include OSI model, legacy technology overview, TCP/IP, LAN and WAN technologies, how the Internet works, switching and routing basics. Students will be given hands-on exercises to reinforce the knowledge taught in class.

NTW214 Network Engineering Hardware (3)
Prerequisite(s): None
In contemporary IT architectures, understanding the physical world is just as important as understanding the logical world. This course will prepare students to understand all things physical in a contemporary IT architecture. Topics will include an overview, installation and troubleshooting of server hardware, routers, switches, wireless access points, laptops, memory upgrades, all types of cabling, CSU/DSU, fiber optics, patch panels, printers and electrical power types. This course will prepare students to perform the hardware tasks that are an integral part of the IT professional skill set.

NTW216 Foundations of Systems Administration (3)
Prerequisite(s): NTW102
This course will lay the foundation on which to build a working knowledge of system administration. This class will provide a comprehensive overview of contemporary systems administration with a particular focus on Microsoft based environments. An overview of the available server and desktop operating systems, their common use cases and their strengths and weakness will be given. Topics such as active directory, user/computer/group management, resource permissions, optimizing performance, backup, storage, server monitoring will be covered. Students will be armed with a baseline of knowledge with which to identify and understand server infrastructures for business solutions. Students will be given hands-on exercises to reinforce the knowledge taught in class.

NTW245 Applied Mobile Computing and Cloud Collaboration Technologies (3)
Prerequisite(s): NTW216
This course will provide students with an understanding of the modern mobile computing technology landscape. The explosive growth in this area makes this essential knowledge for the IT engineer to have. Wireless fundamentals and history will be covered. Popular topics such as how to manage smartphones, tablets and other mobile consumer devices in a business environment and how service providers architect their wireless networks to accommodate mobile devices will be covered. Wireless technologies such as GSM, CDMA, 3G/4G, LTE, 802.11, Bluetooth and WiMAX will be introduced. Students will learn the various wireless and collaboration technologies influencing modern corporations and service providers. This course will also explore the types, uses and configuration of on-demand collaboration, solutions email systems, file sharing, web publishing, web portals, content management solutions, online meeting, instant messengers, web-based word processor, spreadsheet, presentation, and data storage services. During this course you will learn the business drivers, social drivers and technology being used to mobilize the collaborative workforce. The trend towards consumerization of IT will also be discussed. A study of these technologies will prepare students to make objective evaluations of the different wireless/mobile and collaboration technologies and their use cases. Students will be given hands-on exercises to reinforce the knowledge taught in class.

NTW440 Business Continuity/Disaster Recovery (3)
Prerequisite(s): NTW216
Business continuity planning and disaster recovery planning are vital activities and required knowledge for the Information Systems Engineer. For every IT system, location or process there should be a companion continuity and recovery plan. This course will explore this topic in detail, highlighting topics such as creating a plan and maintaining a plan. The COBRA methodology for Business Impact Analysis and Risk Analysis will be used. This project-based course will allow you to create a business continuity and disaster recovery plan using best practices learned in this course.

PHYSICS (PHY)

PHY125 Introduction to Electricity and Magnetism (3)
(GE, Science)
Prerequisite(s): MAT174
This course will introduce the student to basic concepts of electricity and magnetism with discussion of practical applications. Charges and fields will be used to understand the concepts of potential, resistance, capacitance and inductance, and to solve basic DC circuits. Math through college algebra is required.

PHY350 Physics Game Programming (3)
(GE, Science)
Prerequisite(s): PHY101 and (CSC202 or CSC203 or CSC215)
This course introduces the student to the concepts of physics as they are used, presented and manipulated in video games. Concepts of gravity, force, friction, momentum, Newton's Laws, velocity, acceleration, vector force analysis and others will be presented and analyzed.

PROFESSIONAL DEVELOPMENT (PRO)

PRO103 Professional Skills Development (3)
Prerequisite(s): None
Unlike traditional college introduction courses, students learn brain-based study strategies, how to think critically, and how to problem-solve. Topics such as cyber bullying, analysis through different perspectives, leadership skills and emotional intelligence will be explored. Students will demonstrate their knowledge through graphic representations, discussion threads, and interactive discussions and debates in class. Through course activities and discourse, students will be exposed to a variety of critical and strategic thinking skills, which they will need to conduct their student innovation projects.

PRO211 Student Innovation Project I (3)
Prerequisite(s): None
In this course, students will explore potential topics for their innovation project. They will engage in a series of workshop-based exercise to explore their fields and employ discovery learning techniques to find background information on their selected subject. Students will form their ideas into a plan to be used as the basis for developing their innovation. In the process of exploring and sharing their work, students will engage the various types of innovations and demonstrate the ability to communicate their ideas to others.

PRO483 Student Innovation Project and Portfolio Presentation (3)
Prerequisite(s): PRO211 and completed portfolio objectives
This course completes the innovation project and portfolio process providing guidance and structure for the formal presentation of the students' work. Student will passionately and clearly articulate their innovation and portfolio work through public presentations. Students entering this class are expected to have completed all works included in their portfolio and have their innovation brief completed.

PSYCHOLOGY (PSY)

PSY310 Social Psychology (3)
(GE, Social Sciences)
Prerequisite(s): None
Why do people behave a certain way? Can behaviors be predicted, controlled and changed? Have you ever been a victim of somebody who took advantage or tried to manipulate? What are persuasion and brainwashing? This course explores theory, research and application that make up the discipline. It examines both the traditional areas of the field, as well as more recent innovations. The course pays particular attention to the applications developed by social psychologists. The major goal of the course is to explicitly tie social psychology to lives of students.

PSY450 Psychology of Conflict and Violence (3)
(GE, Social Sciences)
Prerequisite(s): None
Why is there evil? What motivates people who perpetuate it? How do they manage to reconcile their actions with a self-image that does not embrace evil? This course proposes an overview of the social and psychological factors that fuel conflicts between individuals, groups, communities and nations. The material covered emphasizes the history and nature of criminal behavior, extremism, terrorism and war. The course pays particular attention to conflict, stress and fear management. Learning activities include reviews of case studies and analysis.

TECHNOLOGY (TCH)

TCH150 Technology and Society (3)
Prerequisite(s): None
This course introduces students to the historical, contemporary, and possible future interdependencies of technology and society. These elements are discovered through readings, activities, discussions, and forecasts related to the reciprocal relationship between technological and social development. This course provides students with tools necessary to understand the roles technologies play in society and to prepare students for interaction within emerging technology environments. Technology will be recognized as a driving force in social change, and societal needs as a driver of technological change. Students will consider the nature of technological change in contemporary society, as well as what these changes mean.

TCH301 Ethics in Technology (3)
Prerequisite(s): ENG101
This course is designed to introduce students to essential concepts necessary to evaluate the ethical implications and potential impacts of the use of new technology within human society and culture. Students will explore modern ethical dilemmas in technology, looking at multiple aspects of how the introduction of technology redefines law and values.

VISUALIZATION (VIS)

VIS110 Scientific Visualization (3)
Prerequisite(s): None
This is an introductory course that surveys the expanding field of Scientific Visualization, and will explore various industries, data display methods and technologies, visualization types, and scenarios in which data visualizations are utilized.

VIS210 Information Visualization (3)
Prerequisite(s): VIS110
This class will explore the history and means of presenting data in meaningful ways to decision makers. Students will gain an understanding and demonstrate how to visualize information to users in a variety of formats, including transactional database visualization. Additionally, students in this course will create their own information visualization projects. These projects can range from novel methods for displaying stock market data, to the social network distance of Kevin Bacon to the most recent 20 presidents.

VIS310 Embedded Visualization (3)
Prerequisite(s): VIS210
Data visualizations are embedded when they correlate data to a physical phenomenon or object through compositing, projection, haptics or integrated hardware technologies. Examples are a national map that responsively displays crime statistics by county over time, or a video of a roller coaster that displays g-force, acceleration and speed values in real time. Using their knowledge of visualization strategies and hardware technologies, students will create their own embedded data visualizations.

VIS350 Engineering for Visualization (3)
Prerequisite(s): None
This course is an overview of engineering documentation and the process for translating data to real world 3D visualization. Students will examine tools that allow for the extraction of motion tracking data for creation of 3D simulations in a variety of areas. In addition students will explore the use of CAD as an engineering tool and the process for interpreting engineering information towards the creation of scale environments.

VIS410 Scientific Visualization Project (3)
Prerequisite(s): VIS310
The use of multimedia and visualization technology and practices will be put to use in this course. Students in this course will propose, design, develop, deploy and test applications to solve a stated scientific visualization need. This will require the analysis of the data or situation as well as the skills necessary to create an application to communicate this information to the end user.

INFO

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