

# DIGITAL COMMUNICATIONS & MEDIA (DGCM1-UC)

## DGCM1-UC 312 Content Strategy CX for Digital Media (4 Credits)

*Typically offered occasionally*

This course will analyze both the political meaning and strategic planning behind globalized digital media. Content strategy (CX) requires individuals from various media backgrounds to work on a common platform to solve problems and provide solutions. These strategies may be local or global. The strategies combine typical business constraints of deadlines, budget, and client needs with a theoretical or economic strategic outlook. This is crucial in pre-project planning and data analytics during a project. In this project-based course, students will learn to generate strategic media ideas within a set of given economic constraints. The course prepares the students to better apply their media skills in "the real world," where constraints determine what can and cannot be designed. The course builds students' understanding of the many roles in a media team, from improved design thinking to an understanding of management criteria. A final content strategy (CX) project aims to be a portfolio piece for the aspiring media professional.

**Grading:** UC SPS Graded

**Repeatable for additional credit:** No

## DGCM1-UC 1013 History of Telecomm & Media (4 Credits)

*Typically offered occasionally*

A detailed chronology of communications technologies is provided including print, telegraphy, telephony, radio, television, data communications, and the Internet. Emphasis is on how these technologies were funded and shaped by commercial and financial forces, as well as by government and military support. It also endeavors to specify the linkages between communications technologies and social concerns involving culture, economics, education, and politics. Of particular interest for discussion is the notion of "public interest."

**Grading:** UC SPS Graded

**Repeatable for additional credit:** No

## DGCM1-UC 1404 Media Design I: Concepts (4 Credits)

*Typically offered occasionally*

This course explores the fundamentals of two-dimensional design and provides students with strong visual communication skills in preparation for print, interactive and time-based media. Basic elements of visual composition, typography, color, and image are addressed. Through research, experimentation, problem-solving and critique, students develop a strong design vocabulary, a rigorous creative process, an understanding of best practices, and a heightened awareness of the visual world.

Over the course of the semester, increasingly complex problems are examined and realized with both tactile and digital solutions. Students learn the creative skills to think conceptually, execute design methods, and critically evaluate in the context of graphic design.

**Grading:** UC SPS Graded

**Repeatable for additional credit:** No

## DGCM1-UC 2200 Sp Tpcs DCoM (2-4 Credits)

*Typically offered occasionally*

This course addresses new and important developments in the field. Changing topics cover film title design, special effects, animation, web or mobile development, and an expert lecture series. Please find the current topic and description in the Albert Class listing or contact McGhee Advising.

**Grading:** UC SPS Graded

**Repeatable for additional credit:** Yes

## DGCM1-UC 2204 Interactive Devices (4 Credits)

*Typically offered occasionally*

As the design of interactive media and digital interfaces moves beyond desktop and laptop modes of interaction, these older modes are reconfigured and repurposed for new types of hardware. Likewise, new modes of interaction, such as gesture, touch, augmented, and geolocation, are now part of mainstream design. In this class, students will first learn to assess the usability of modes of interaction and then design for these modes of interaction by prototyping an application. Students who complete the class will have the assessment and design skills necessary for working with new and emerging modes of digital interaction.

**Grading:** UC SPS Graded

**Repeatable for additional credit:** No

## DGCM1-UC 2209 Sound Design in Post- Production (4 Credits)

*Typically offered occasionally*

Sound Design & Post Production is an intensive analytical, and hands-on course that covers the aesthetics and production techniques of sound design. As an art form, sound design has become an increasingly important part of movies, television, and music production. In this course, the techniques of award-winning sound designers will be studied and emulated using the industry-wide standard software platform ProTools. Rigorous hands-on training is a core component of Sound Design & Post Production. Creation of original sound design projects and solving post production problems utilizing ProTools will be the focus of this course. Upon completion of this course, you should be able to hear and identify sound design and post-production techniques, be facile with ProTools software, solve common post-production audio problems, understand the terminology of sound design and audio post-production, and create sound design projects using ProTools.

**Grading:** UC SPS Graded

**Repeatable for additional credit:** No

## DGCM1-UC 2210 Wireless Communications (4 Credits)

*Typically offered occasionally*

Extensive technologies have been developed to modulate electromagnetic radiation so that it can carry useful information. This course covers the use of wireless communications for services such as mobile telephony and e-commerce. It covers the FCC and ITU allocations of radio spectrum and technological standards such as CDMA and TDMA. It also discusses second (2G) and third (3G) generation wireless transmission standards with a specific focus on new 3G standards such as WML (Wireless Markup Language) and WAP (Wireless Application Protocol). It also covers the auctioning of public spectrum for wireless services.

**Grading:** UC SPS Graded

**Repeatable for additional credit:** No

## DGCM1-UC 2220 Digital Media Management (4 Credits)

*Typically offered occasionally*

This course provides a systematic introduction to digital media management by focusing on the competitive strategy and operational aspects of media industries. The course prepares students for leadership and management positions as well as entrepreneurial activities in interactive and digital communications. Specific attention is given to the creation and maintenance of competitive advantage, media segmentation, and the management of innovation. Principles are applied to practice through the use of real-world case studies.

**Grading:** UC SPS Graded

**Repeatable for additional credit:** No

**DGCM1-UC 2221 Digital Media Mgmt II (4 Credits)***Typically offered occasionally*

Digital media management is the coordination and control of the people and processes involved in the creation, storage, transmission, and processing of digital content. This course investigates the different managerial responsibilities in the digital media industries, including analyzing media markets, managing personnel, raising capital, enhancing innovation, setting information policy, and developing appropriate measures for media consumption. The course covers phases of project management cycles such as feasibility, analysis, design, production, implementation, and evaluation.

**Grading:** UC SPS Graded**Repeatable for additional credit:** No**DGCM1-UC 2222 Collaboratn Technologies (4 Credits)***Typically offered occasionally*

In today's complex global economy, group projects and teamwork take on increased significance: colleagues, clients, customers, and subcontractors are often distributed across space as well as time, requiring new ways to communicate and interact. Collaboration technologies enhance team and workplace cooperation and effectiveness through the ability to edit complex information within groups, organize thoughts and ideas, coordinate learning, and manage information for meetings, presentations, projects, proposals, research, etc. This course introduces the issues, benefits, theories, and methodologies related to the collaborative technologies that are increasingly critical to the management of modern organizational settings and participation in interactive teams.

**Grading:** UC SPS Graded**Repeatable for additional credit:** No**DGCM1-UC 2223 Digital Technology and Law (4 Credits)***Typically offered occasionally*

This course discusses significant intersecting areas of business, technology, law, regulation and policy that impact the worlds of digital communications, media and technology. Topics include: Internet governance, regulatory policy and law (data, telephony, mobile, video); information technology (data storage and security); intellectual property (copyright, patents, trademarks); legal basics (contracts, U.S. Constitution); and related business issues.

**Grading:** UC SPS Graded**Repeatable for additional credit:** No**DGCM1-UC 2230 Motion Design III:3D Animation Basics (4 Credits)***Typically offered occasionally*

This studio class introduces students to the tools and the concept of 3D visual effects and animation production using the industry standard Maya or equivalent package. As students get familiar with the various tools and functions, they will create their first projects as they apply to industries such as broadcast, commercials and film. The course creates a real world post-production experience, stressing the use of the appropriate tools and professional workflow. Students focus on high level object building, photo realistic texturing and lighting, the use of the computer camera, as well as basic layout and scene composition. Autodesk, maker of Maya, offers the software free to students.

**Grading:** UC SPS Graded**Repeatable for additional credit:** No**DGCM1-UC 2231 Motion Design IV: 3D Animation Intermediate (4 Credits)***Typically offered occasionally*

This course advances students' understanding of Computer Modeling, Texturing and Animation in Maya. Conceptual design and modeling workflow are covered in this semester as well as basic animation techniques. The focus is to generate a character that can then be used as a subject for animation in the Advanced Computer Animation course. A secondary focus is on broadcast and logo animation. The class-time will be divided into critique, lecture, screenings, and hands-on work on either exercises or assignments.

**Grading:** UC SPS Graded**Repeatable for additional credit:** No**DGCM1-UC 2232 Advanced Computer Animation (4 Credits)***Typically offered occasionally*

This course develops the student's ability to properly construct 3D rigs for character animation, utilizing common techniques used by industry experts and develops the student's character animation ability and understanding for motion. Students learn advanced 3D techniques and concepts, developing a sense for aesthetic content and to think creatively in 3D space and timing. Students learn the requirements of different specialized fields in 3D animation studios from industry employees.

**Grading:** UC SPS Graded**Repeatable for additional credit:** No**DGCM1-UC 2233 Advanced Compositing & Visual Effects (4 Credits)**

This course covers fundamental and advanced techniques of object-oriented compositing. Topics covered include: how to properly combine different source footage materials (such as live-action shots) with green-screen shots and 3D graphics; understanding compositing 2D and 3D workflows; the latest techniques for compositing, keying, tracking, and manipulating footage to yield a finalized FX shot; common image and film formats, such as DV, HDV, and HD; differences between nodal-based compositing workflows and more standard motion graphic applications, such as After Effects; and the specialized fields in visual effects, in order to better understand studios and their hiring expectations. Shake, Nuke, or equivalent object-oriented compositor software is used.

**Grading:** UC SPS Graded**Repeatable for additional credit:** No**DGCM1-UC 2234 Engaged and Sustainable Media (4 Credits)***Typically offered occasionally*

This is a theoretical class with a large media project component using time-based media, virtual or online platforms to address topics in aesthetics, ethics, and participatory culture through texts and the students' own work. The class is divided into two modules. The first module analyzes mass media and forms of media literacy, measured against ethical criteria in the changing landscapes of social and participatory media. This learning shapes the second module, using more than half the class sessions; student teams develop a not-for-profit local media campaign for an environmental or political cause using social, participatory or virtual media as their platform. The local campaign ends with a debriefing on effect, audience, teamwork, and concept. NOTE: A student entering this class should have some basic media production knowledge. A student must be able to work with a team on a hands-on media project and fill one of these roles: social media, writing, graphics, web, motion design, video, or audio.

**Grading:** UC SPS Graded**Repeatable for additional credit:** No

**DGCM1-UC 2235 Motion Design I: Time and Space (4 Credits)***Typically offered occasionally*

This course provides an overview of the fundamentals of motion graphics with consideration to broadcast, film, and multimedia applications. Using Adobe After Effects, students will be introduced to kinetic graphic design, 2D animation and compositing. Through exercises, projects, critiques and the viewing of a wide range of related professional work, students will develop their conceptual, technical and aesthetic skills in motion graphic design and animation. Topics include project organization, keyframing and vector animation, stop motion animation, transitions, "painting" with video, layering, effects, masking, alpha modes, rendering, and output. Students will create a series of small-scale animations that explore increasingly complex tools for artistic application. You will gain proficiency with Adobe After Effects as a post-production tool and develop timing, pacing skills.

**Grading:** UC SPS Graded**Repeatable for additional credit:** No**DGCM1-UC 2236 Motion Design II: Effects and Compositing (4 Credits)***Typically offered occasionally*

For students who have mastered the technical basics, this course emphasizes the use of effects to support your visual concept with artistic decisions and design strategies. Using After Effects, students explore the complexity of life video combined with 2D animation using expressions, effects, parenting, 3D controls, lighting, and audio. Students learn to analyze effects sequences and decipher ways to recreate them in After Effects. Projects are developed step-by-step, mirroring a real-life client-artist relationship and are intended to result in a professional piece for a demo reel.

**Grading:** UC SPS Graded**Repeatable for additional credit:** No**DGCM1-UC 2237 Typography for the Screen (4 Credits)***Typically offered occasionally*

This course is an intensive introduction to screen-based graphic design in broadcast and web environments using Photoshop in particular, with a brief look into Adobe Illustrator, After Effects, and other applications. Assignments are based on typographic and design solutions. Short lectures cover design concepts and workflow as an important aspect of professional teamwork. We cover concept, pre-production, production, and post-production with a strong emphasis on the latter. You will learn to develop a concept, communicate it to a prospective client, and realize it with state-of-the-art tools. You learn the specifics of screen typography and design as well as soft skills that studios are looking for in a broadcast or web designer or animator. In addition to smaller exercises, each student will develop a set of stills and complete a 15-second animation. Critique, visual and verbal communication are an important part of the class.

**Grading:** UC SPS Graded**Repeatable for additional credit:** No**DGCM1-UC 2238 Media Design II: Techniques and Convergence (4 Credits)***Typically offered occasionally*

What differentiates today's media production from its recent historical predecessors? How does the use of computers in all media influence a designer's conceptual approach and the clients' branding expectations? How do you carry a design from print to web to television to mobile? These are questions this course will address. This face-paced overview class provides a technical foundation that will enable you to better plan, delegate, or execute digital production. The introduction to design principles and a variety of applications serve as a basis for the designer or animator from which to specialize into any of the discussed fields. The course covers still graphics, video production, and 2D animation for screen-based applications on a variety of platforms.

**Grading:** UC SPS Graded**Repeatable for additional credit:** No**DGCM1-UC 2239 Media History: Art, Design, and Technology (4 Credits)***Typically offered occasionally*

The seminar provides a historical, technical, and theoretical overview of communications media. Touching on historical milestones from their earliest inception, the focus of the course is on the development of media arts alongside their respective technical innovations in print, sound, photography, telecommunications, cinema, and broadcast leading up to the accelerated changes with the introduction of the computer as an artistic medium for digital and interactive art and design in the last decades of the 20th century. Accompanying texts and discussions aim to create an understanding of the interconnectedness of art and technology - of the impact of social structures on culture - of the shared philosophies driving innovation on art, architecture and design; photography, film, music, television and theatre.

**Grading:** UC SPS Graded**Repeatable for additional credit:** No**DGCM1-UC 2240 3D Explorations from Screen to Laser Cut (4 Credits)**

This course expands student's creative vision through the integration of digital media with 3D design-thinking and making. Students will gain an awareness of the ways in which the multi-media landscape is changing as the next generation of artists and designers integrate digital and physical experiences fluidly in their creative practices. We will start with an introduction to 3D design principles via paper cutting and construction techniques that will lead students through the process involved in the design of vector-based graphic forms suitable for laser-cutting. Students will create at least one laser cut project, designs and concepts for an interactive package design "experience" and a proposal for a public art project. Previous 3D making experience is not required, but students are recommended to take DGCM1-UC1404 Media Design I prior to this class.

**Grading:** UC SPS Graded**Repeatable for additional credit:** No

**DGCM1-UC 2241 Sketching and Storyboarding (4 Credits)***Typically offered occasionally*

This class aims to train your eye by using sketching, video and observation for a better understanding of objects, dynamics and movement. Your standing as a digital artist is greatly improved if you are comfortable sketching out your ideas in a meeting or blocking a scene on paper. Any complex project uses storyboarding in its pre-visualization phase. This class will give you a fast-paced introduction to basic drawing skills and then focuses on drawing needed in storyboarding for film and animation. Using pencils and charcoal on paper we move from perspective, light, and shadow to figurative motion sketches and storyboarding. We will interpret the visual impact of camera angles, composition, and use video for frame-by-frame analysis of different walk characteristics. In the last part of the class you will create a storyboard for a medium of your choice and may transfer your drawing into the digital realm using various painting programs. Class time will be divided into critique, discussion, lecture and mainly drawing.

**Grading:** UC SPS Graded**Repeatable for additional credit:** No**DGCM1-UC 2270 Information Design (4 Credits)***Typically offered occasionally*

This course introduces the students to the fundamentals of information architecture, navigation systems, and user experience. Course topics are addressed through salient examples and the development and assessment of analog and digital projects. Students will be introduced to relevant technologies for the design and development of concept maps, site maps, graphic design, and web production. There are no prerequisites for this course, but students should have a basic grasp of HTML.

**Grading:** UC SPS Graded**Repeatable for additional credit:** No**DGCM1-UC 2271 Interactive Design I: Building A Website (4 Credits)***Typically offered occasionally*

This course focuses on the process and practice of developing content/ideas for the web. We will explore these ideas by working with design treatments that are specific to an online setting. The class will examine this process, from the conceptual development, through the creative, and follow through to the technical execution of the design/content. While foremost a design class, in order to execute online concepts, we must learn the necessary tools. It is important to note that when dealing with these digital tools, we do not let the technology drive our thoughts, nor limit them. Our ideas drive the technology. As we develop our own work and analyze others, some questions that we will keep in mind throughout the course are:

- What is the main message that we are driving towards the user?
- Who is the target audience of the material being presented?
- What makes this particular design/execution stand out amongst its competitors?

**Grading:** UC SPS Graded**Repeatable for additional credit:** No**DGCM1-UC 2272 Interactive Design II: Dynamic Interfaces (4 Credits)***Typically offered occasionally*

Interactive Design II is a class that explores principles of design, typography, project management, and how to merge effective design and code to create a dynamic, interactive user experience. We will explore various technologies to realize your ideas including JavaScript, HTML5, and CSS3 and methods such as Responsive Design. The class will focus on strategy, design, and execution of your ideas. Aside from just presenting information in the online format, we will examine ways in which an online experience can differentiate itself from competitors. Projects will incorporate various methods and technologies including video, sound, and dynamic interactivity to develop compelling designs for multiple browsers and devices. You will learn how to take your idea from its conception through design and follow through to final execution.

**Grading:** UC SPS Graded**Repeatable for additional credit:** No**DGCM1-UC 2273 Database Design for The Web (4 Credits)***Typically offered occasionally*

This course examines theories, strategies, and practices concerning interaction and experiential design. Students examine assorted web-based and digital media, employing concepts of storytelling and narrative, sequential and nonsequential structures, and user participation to assess and construct immersive environments and experiential systems. Students develop a semester-long project; personal reflection and critical analysis are important components of the course, as projects are discussed and critiqued throughout the semester.

**Grading:** UC SPS Graded**Repeatable for additional credit:** No**DGCM1-UC 2274 Ubiquitous Multimedia Applications (4 Credits)***Typically offered occasionally*

This hands-on course teaches students how to integrate animation, data, images, video, and sound into a website. Video and sound are compressed and prepared for downloading, streaming, or Web/podcasting. It explores new developments in Internet Protocol TV (IPTV) and telephone (VOIP). The course starts with a theoretical component that analyzes the different uses, audience expectations, and business models underlying Web-based video and audio distribution. It is followed by hands-on sessions for actual compression, tests, and integration of media into a webpage.

**Grading:** UC SPS Graded**Repeatable for additional credit:** No**DGCM1-UC 2275 Interactive Storytelling (4 Credits)***Typically offered occasionally*

Interactive Storytelling examines theories, strategies, and practices concerning sequence and structure. Students explore the interactive capabilities of digital media. The goal of this class is to identify and create narrative structures, making experiential and coherent digital systems. Students will be asked to examine and use various digital technologies; employing concepts of storytelling and narrative, sequential and non-sequential structures, and user participation to assess and construct immersive environments and experiential systems. Students are expected to develop a semester-long project as well as smaller weekly projects. Personal reflection and critical analysis will be important components of this course as projects will be discussed and critiqued throughout the semester.

**Grading:** UC SPS Graded**Repeatable for additional credit:** No

**DGCM1-UC 2276 Interactive Design III: Advanced Concepts (4 Credits)***Typically offered occasionally*

Dive deeper into web application development by exploring various methods to design and build highly interactive, dynamic websites. Websites are no longer a collection of static pages. The modern website is a fluid interface—a sleek, responsive façade that updates in real-time and adapts to any device. Further explore HTML5/CSS3/jQuery and the emergence of “full stack” JavaScript development. Through a series of lectures, discussions, in-class exercises and assignments, students will learn the tools and techniques employed by modern web developers, and the fundamentals of product discovery used in the most innovative companies today. Students are required to have a solid understanding of web design and coding principles.

**Grading:** UC SPS Graded**Repeatable for additional credit:** No**DGCM1-UC 2277 Internet Infrastructure & Domains (4 Credits)***Typically offered occasionally*

In this course students focus on the strategic use of web technologies for commercial and non-commercial services by developing in-depth knowledge of the Internet's technical infrastructure including .peer-to-peer (P2P) networks, data farms, and the Internet's domain name system. Understanding the workings of the Internet and its protocols will help the students to understand and develop advanced web services, including interactive applications and media streams, while avoiding problems related to network congestion and cyber attacks.

**Grading:** UC SPS Graded**Repeatable for additional credit:** No**DGCM1-UC 3000 Case Studies in User Experience Design (4 Credits)***Typically offered occasionally*

In this course, students will apply their design skills to the assessment of existing user experience designs and to case studies that examine the management of user experience projects. Through a semester-long project with a real corporate client, students will identify, integrate, and test the fundamental principles of usable design. By completing the course, students will gain a project for their portfolio that demonstrates their mastery of the principles of usable design and their skills in designing and implementing usability studies for interfaces and objects. Through a series of supplemental case studies, students will develop the skills necessary to lead usability teams and work as usability consultants.

**Grading:** UC SPS Graded**Repeatable for additional credit:** No**DGCM1-UC 5201 Narrative Theory & Screenwriting (4 Credits)***Typically offered occasionally*

This course focuses on the study and practice of the fundamentals of narrative, visual storytelling, and dramatic writing for dramatic animation, film, and television. Narrative strategies for writing characterization, dialogue, pacing, setting, and structure are examined through exemplary films and television and screenwriting exercises. Screenwriters have the option of adapting a work in the public domain or writing an original script. Screenwriting software is a focus of analysis and instrument of production.

**Grading:** UC SPS Graded**Repeatable for additional credit:** No**DGCM1-UC 7942 Internship: Digital Communications & Media (2-4 Credits)***Typically offered occasionally*

Digital Communications & Media students may undertake an internship early in their academic career which can be 2 to 4 credits. To qualify for a DGCM internship, students should be in good standing within their program and have the approval of their advisor. Students wishing to consider a DGCM internship should submit a proposal outlining their internship which must then be approved by the Internship Program Coordinator. After the proposal is approved, students undertake an internship which typically entails outplacement in an organization related to the student's interests or academic concentration. A minimum of 100 hours is required over the course of the semester. In addition to the hours at their internship, students meet regularly with the internship coordinator and other interns, maintain a weekly journal, and (required for a 4 credit internship) complete a final paper or work portfolio.

**Grading:** UC SPS Graded**Repeatable for additional credit:** Yes**DGCM1-UC 7990 Senior Project: Industry Mentoring and Portfolio (2 Credits)***Typically offered occasionally*

This course prepares for Senior Project: Seminar OR Senior Project: Internship and begins the student's transition to his/her chosen career. Students create a portfolio site, which is essential for employment and success in the creative field. Students enter the class with a draft portfolio, preferably the student's website or a Vimeo site. Several guest critics/mentors give individual feedback. Students then use the feedback to update and finalize their portfolios for a final critique on the last week of classes. A major part of the class is the "Mentor for a Day" program, where students spend a workday shadowing a creative at a chosen media company. Students are encouraged to build and maintain the established contacts for their future employment.

**Grading:** UC SPS Graded**Repeatable for additional credit:** No**DGCM1-UC 7991 Senior Project: Seminar (Digital Communications and Media) (2 Credits)***Typically offered occasionally*

This seminar is the capstone of your undergraduate studies. Drawing on your acquired skills, you will create a complete media production related to your career goals. The resulting work should be part of a demo reel or website to support the students' entry into their profession. After the initial approval of the topic, the student develops the project under the guidance of a faculty mentor. The seminar will provide the student with discussions of research topics of general interest, feedback and constructive criticism of individual projects, and individual mentoring sessions. Papers and project must be the student's individual, original work and include the creative project, treatment, journal, technical documentation, and a learning experience essay summarizing the process and skills used. The final project will be presented to a panel consisting of faculty members or industry guests. One member can be an invited professional of the student's choosing.

**Grading:** UC SPS Graded**Repeatable for additional credit:** No

**DGCM1-UC 7992 Senior Project: Internship (Digital Communications and Media) (2 Credits)**

*Typically offered occasionally*

The internship provides an opportunity for students to combine knowledge gained in their major with the expertise provided by professionals in a variety of industry settings. In addition to a minimum of 100 hours at their placement, students meet with the internship coordinator, maintain weekly journals, and complete a final essay summarizing the outcome of the learning experience, including samples of work completed. Several months in advance, the student contacts the internship coordinator and adviser to start the internship search using the NYU Career net or personal searches. Note: A student's regular paid position cannot double as an internship.

**Grading:** UC SPS Graded

**Repeatable for additional credit:** No

**DGCM1-UC 7993 Senior Project: Independent Study (Digital Communications and Media) (2 Credits)**

*Typically offered occasionally*

This seminar is the capstone of students' undergraduate studies. Drawing on acquired skills, students create a complete media production related to their career goals. The resulting work will be part of a demo reel or website to support students' entry into their profession. After the initial approval of the Independent Study topic, the student will develop the project under the guidance of a faculty mentor.

**Grading:** UC SPS Graded

**Repeatable for additional credit:** No