DEREE COLLEGE SYLLABUS FOR:

ITC 3120 DIGITAL VIDEO AND AUDIO TECHNOLOGIES 2/1/2

(Updated Spring 2016)

PREREQUISITES:	ITC1070 LE Information Technology Fundamentals –or– CS1070 Introduction to Information Systems
CATALOG DESCRIPTION:	Digital video and audio technologies, file formats, compression strategies, codecs, editing techniques, transitions, effects, titling, motion graphics, recorded audio, processing and transformation. Methods of audio/video hardware and software integration.
RATIONALE:	Audio and Video are two of the most important types of media required in the integration of a multimedia system. The course aims to provide the knowledge and skills required to produce a complete video & audio clip.
LEARNING OUTCOMES:	As a result of taking this course, the student should be able to: 1. Identify and analyse fundamental concepts of video and audio technologies. 2. Distinguish between various compressions strategies. 3. Evaluate aesthetics principles and apply motion design in video sequences. 4. Utilize appropriate video and audio editing software to develop digital A/V projects ready for multi-platform delivery.
METHOD OF TEACHING AND LEARNING:	In congruence with the teaching and learning strategy of the college, the following tools are used: • Classroom lectures, class discussions. • Laboratory sessions, involving training and practice in the creation of video and audio clips. • Instructor office hours • Use of the Blackboard Learning platform, where instructors post lecture notes, assignment instructions, timely announcements, as well as additional resources.
ASSESSMENT:	**Summative:**

Project: requirements analysis/video and audio clip editing / processing /documentation	**50%**
Final Examination (2-hour comprehensive): combination of short essay questions and case problems	**50%**

Formative:

In class "diagnostic" test: short answers to essay questions.	0
Coursework: creation and editing of video and audio clips / case problems	0

	The formative assessments aim to prepare students for the examination and for the project.
	The "Project" tests Learning Outcomes 3, 4
	The "Final examination" tests Learning Outcomes 1, 2, 3
INDICATIVE READING:	**REQUIRED READING:** Chapman N., Chapman J. (2009). *Digital Multimedia*, John Wiley & Sons Ltd. Bruce Fries, Marty Fries. (2005*). Digital Audio Essentials*, O'Reilly, Safari Books. Adobe Video and Audio Collection software manuals Instructor Notes and On-Line Help **RECOMMENDED READING:** Adobe Creative Team. (2015). *Adobe Premiere Pro CC Classroom in a Book,* Adobe Press. Greenberg J. (2013). *Adobe Premiere Pro Studio Techniques*, Adobe Press. Harrington R. (2011). *An Editor's Guide to Adobe Premiere Pro*, Peachpit Press. Herbert Zettl. (2010). *Video Basics*, Cengage learning. Ling Guan, Sun-Yuan Kung, Jan Larsen, S. Y. Kung. (2012). *Multimedia Image and Video Processing*, CRC Press
INDICATIVE MATERIAL: *(e.g. audiovisual, digital material, etc.)*	**REQUIRED MATERIAL**: N/A **RECOMMENDED MATERIAL**: N/A
COMMUNICATION REQUIREMENTS:	Daily access to the course's site on the College's Blackboard CMS. Use of word processing and e-mail.
SOFTWARE REQUIREMENTS:	Adobe Premiere Pro, Adobe Audition, Latest Edition
WWW RESOURCES:	Information on several of Adobe's multimedia software products. http://www.adobe.com A digital media net community http://videoediting.digitalmedianet.com/ Video editing tips and techniques http://www.videomaker.com/learn/post-production/video-editing/

INDICATIVE CONTENT:	1. Video and audio technologies
	    1.1. Types of video signals
	    1.2. Color modes in video
	    1.3. Digitization of sound
	    1.4. MIDI audio
	    1.5. Compression strategies
	    1.6. MPEG codec

2. Capturing video and audio (acquisition phase)
   2.1. Audio hardware
   2.2. Video hardware
   2.3. Device control
3. Video and audio editing environment (ingestion phase)
   3.1. Importing files
   3.2. File organization
   3.3. Views and adjustments
   3.4. The timeline
   3.5. Navigation controls
4. Playing and watching media
5. The editing workflow
   5.1. Basic editing
   5.2. Timeline editing
6. Transitions and effects
7. Audio techniques and integration
   7.1. Importing
   7.2. Volume levels
8. Recording and editing a voiceover
   8.1. Speed adjustments
   8.2. Pitch shifting
9. Applying audio effects and mixing
10. Working with still images
    10.1. Image sizes and scaling
    10.2. Sequences
11. Applying project titling and templates
    11.1. Creating and managing titles
    11.2. Working with logos
    11.3. Working with templates
12. Applying advanced editing techniques
    12.1. Trimming and modifying
    12.2. Establishing synchronization
    12.3. Color correction and matching
13. Mastering & multi-platform delivery
    13.1. Exporting techniques and formats
    13.2. Signal conversions
    13.3. Encoding and compression
    13.4. Recording mediums and standards.