Title (Units): **ITEC3006 Music, Photo and Movie Processing (3,2,2)**

Course Aims:

1. To learn the basic concept and principle for music, photo and movie processing in daily life applications
2. To master software skills for music, photo and movie processing such as music file compression/conversion, photo enhancement and movie editing.

Prerequisite: Any ITEC course or COMP1005 Essence of Computing

Course Intended Learning Outcomes (CILOs):
Upon successful completion of this course, students should be able to:

No.	Course Intended Learning Outcomes (CILOs)
	Knowledge
1	Explain the concepts and describe the operations of digital music processing
2	Explain the concepts and describe the operations of digital photo processing
3	Explain the concepts and describe the operations of digital movie processing
4	Describe different digital media standards and technologies
	Professional Skill
5	Design and process music, photo and movie data using software tools
6	Develop multimedia projects

Calendar Description: After completion of this course, students will have a good understanding on the basic concepts of music, photo and movie processing. Students will also be able to use software tools to process music, photo and movie data such as music file compression/conversion, photo enhancement and movie editing. This course is open to non-Visual Arts and non-CS majors only.

Teaching and Learning Activities (TLAs):

CILOs	Type of TLA
1,2,3,4,5,6	Students will learn the concepts and principles of music, photo and movie processing via lectures. Tutorials will be conducted to clarify concepts and to have a deeper understanding of the teaching materials, and problems will be given to students for in-depth discussion.
1,2,3,4,5,6	Students will acquire hands-on experience via laboratory sections.
1,2,3,4,5,6	Students will work on assignments to consolidate and apply what they have learnt.

Assessment:

No.	Assessment Methods	Weighting	CILOs to be addressed	Description of Assessment Tasks
1	Continuous Assessment	50%	1,2,3,4,5,6	Continuous assessments are designed to measure how well the students have learned the basic concepts of digital music, photo and movie processing. The continuous assessments may include tests/quizzes, assignments and laboratory work covering all learning outcomes.
2	Examination	50%	1,2,3,4,5,6	Final examination questions are designed to see how far students have achieved their intended learning outcomes. Questions will primarily be analysis and skills based to assess the students' ability in understanding and application of various digital media elements and technologies.

Assessment Rubrics:

Level of Achievement	Elaboration on Course Grading Description

Excellent (A)	The student's performance is outstanding in almost all the intended course learning outcomes.
Good (B)	The student's performance is good in most of the intended course learning outcomes.
Satisfactory (C)	The student's performance is satisfactory. It largely meets the intended course learning outcomes.
Marginal Pass (D)	The student's performance is barely satisfactory. It marginally meets the intended course learning outcomes.
Fail (F)	The student's performance is inadequate. It fails to meet many of the intended course learning outcomes.

Course Content and CILOs Mapping:

Content		**CILO No.**
I	Introduction to Digital Media	1,2,3,4
II	Music	1,4,5,6
III	Photo	2,4,5,6
IV	Movie	3,4,5,6

References:

- Shandar Junaid and Yue-Ling Wong, Digital Media Primer, 2nd edition, Pearson Prentice Hall, 2012
- Z.N. Li, M.S. Drew and J. Liu , Fundamentals of Multimedia, Springer, 2014
- N. Chapman and J. Chapman, Digital Multimedia, Third Edition, Wiley, 2009
- T. Vaughan, Multimedia: Making it work, Ninth Edition, McGraw-Hill, 2014

Course Content:

Topic

I. Introduction to Digital Media
   A. Music
   B. Photo
   C. Movie
   D. Human perception

II. Music
   A. Acquisition
   B. Digitization and representation
   C. MIDI interface
   D. Music processing – editing and special effects
   E. Compression (MP3) and file format

III. Photo
   A. Acquisition
   B. Representations
   C. Color model and color gamut
   D. Photo processing – editing and enhancement
   E. Compression (JPEG) and file format

IV. Movie
   A. Acquisition
   B. Representations
   C. Movie editing
   D. HDTV
   E. Compression (MPEG) and file format