„Digital media" course program

Course code: IFI6022	Digital Media		
Course volume ECP 4	Contact hours: 28	Teaching semester: Spring	Examination
Course aims:	A purpose of this subject is to enable the students to develop knowledge and competence of recording and editing different types of digital media. To develop competence of using digital audio- and video editing software.		
Brief description of course content:	Different types of media, their representations in analog and digital form. Digital audio recording and editing. Audio compression. Digital video recording and editing. Different formats of digital video. Video compression. Basic special-effects. Description of independent work: Independent work includes creation and editing of audio and video clips.		
Learning outcomes:	After completing this corse, students: Know different types of media, their representation in both – analog and digital form. Know principles of editing digital media. Are able to choose suitale tools for digital media editing. Can record and edit digital audio (including noise reduction, multitrack editing, etc.). Can record and edit digital video (including some basic special effects etc.).		
Ways of assessment:	Exam. Exam contains written test based on lecture material and practical exercise.		
Teacher:	lecturer Andrus Rinde		
Subject title in Estonian:	Digitaalne meedia		
Study literature::	Teachers lecturing materials		
Replacement literature:	Replacement literature is not available, to pass this course student must participate in classes		

Requirements to access to exam:	To access to exam student must submit all homeworks for deadline.
Requirements for homework:	Students have to create and edit different digital audio- and videoclips for different purposes covering all topics discussed during the course. Homework descriptions and deadlines are available on courses web page: www.cs.tlu.ee/~rinde/oppetoo/2014/digitalmedia
Evaluation criteria:	Each higher level includes all the lower levels. 1. Audio A – Knows properties of sound and relationships between them. Knows common values of frequencies and volume. Can create digital audio clips suitable for given purpose and save them in appropropriate format. B – Knows different types og noise. Can use noise reduction tools. C – Knows principles of audio mixing. Can use multitrack editor to mix sound clips. D – Knows different types of audio editing tools and effects, their principles. Can edit audio using tools, suitable to achieve given goal. E – Knows important principles of digital audio recording. Knows important formats of digital audio. Can record digital audio, remove unwanted parts of recorded clip and apply basic effects. 2.Video A – Knows principles of video compression. Can combine video with materials from different sources. Can save video into different formats suitable for given goal. Can create some basic special effects. B – Knows different keying effects and their principles. Can combine different clips using transparency etc. C – Knows important video effects and their usage. Can apply videoeffects, create and add titlles, credits etc. D – Knows different formats of digital video ((DV, HD video, Windows Media Video, QuickTime etc.). Can sequence videoclips, use transitions, add audio to video. E – Knows most important file formats of digital video. Can capture digital video, remove unwanted parts of recorded clip.
Topics, times of contact hours:	Topics by weeks or lectures.

Week 1 – January 29, 12:15 – 13:45	Lecture: Digital vs Analog. Properties of sound. History of sound recording
Week 2 – February 5, 12:15 – 13:45	Lecture: Digital sound recording. Exercise: Digital sound recording.
Week 3 – February 12, 12:15 – 13:45	Exercise: Most important tools of digital audio editing. Sound effects.
Week 4 – February 19, 12:15 – 13:45	Lecture: Noise and noise reduction. Exercise: Noise reduction.
Week 5 – February 26, 12:15 – 13:45	Exercise: Multitrack audio editing.
Week 6 – March 5, 12:15 – 13:45	Lecture: Audio compression. Exercise: Audio editing, individual exercise.
Week 7 – March 12, 12:15 – 13:45	Lecture: History of video. Properties of video. Digital video.
	WEEK FOR INDIVIDUAL WORK.
Week 8 – March 26, 12:15 – 13:45	Exercise: Digital video capture. Important video editing tools.
Week 9 – April 2, 12:15 – 13:45	Exercise: Video transitions, video effects.
Week 10 – April 9, 12:15 – 13:45	Exercise: Combining video with different visual material. Adding titles and credits.
Week 11 – April 16, 12:15 – 13:45	Lecture: Video compression. Exercise: Exporting video into different formats..
Week 12 – April 23, 12:15 – 13:45	Exercise: Introduction to basic special effects..
Week 13 – April 30, 12:15 – 13:45	Exercise: Basic special effects. Individual exercise.
Week 14 – May 7, 12:15 – 13:45	Exercice: Revising homeworks, individual exercice.

Õppeainet kureeriv üksus:	Informaatika instituut
Kursuseprogrammi koostaja	lekt. Andrus Rinde
Allkiri:	
Kuupäev:	15.01.2014

Kursuseprogramm registreeritud akadeemilises üksuses

Kuupäev	16.01.2014
Õppeassistendi nimi	Liina Kirsipuu
Allkiri	