OFFICIAL UNDERGRADUATE COURSE OUTLINE FORM

Note: The University reserves the right to amend course outlines as needed without notice.

Course Code and Number: MEDA 330	**Number of Credits:** 3 Course credit policy (105)

Course Full Title: Compositing
Course Short Title:

Faculty: Faculty of Humanities	**Department (or program if no department):** Media Arts

Calendar Description:

Introduces the theoretical and practical knowledge of compositing. Topics include compositing vocabulary, keying, rotoscopy, digital color theory, video formatting, tracking processes, color correction, 3D integration, and neural networks. Emphasis on good organizational practices and efficient industry-standard workflows.

Prerequisites (or NONE):	Two of FILM 260, FILM 261, VA 119, MEDA 100, MEDA 110, MEDA 210, or MEDA 270.
Corequisites (if applicable, or NONE):	
Pre/corequisites (if applicable, or NONE):	

Antirequisite Courses *(Cannot be taken for additional credit.)*

Former course code/number:

Cross-listed with:

Equivalent course(s):

(If offered in the previous five years, antirequisite course(s) will be included in the calendar description as a note that students with credit for the antirequisite course(s) cannot take this course for further credit.)

Course Details

Special Topics course: **No**

(If yes, the course will be offered under different letter designations representing different topics.)

Directed Study course: **No**

Grading System: **Letter Grades**

Delivery Mode: **May be offered in multiple delivery modes**

Expected frequency: **Annually**

Maximum enrolment (for information only)**: 36**

Typical Structure of Instructional Hours

Lecture/seminar	15
Tutorials/workshops	15
Supervised laboratory hours (computer lab)	15
Total hours	**45**

Labs to be scheduled independent of lecture hours: ☒ No ☐ Yes

Prior Learning Assessment and Recognition (PLAR)

PLAR is available for this course.

Transfer Credit *(See **bctransferguide.ca**.)*

Transfer credit already exists: **No**

Submit outline for (re)articulation: **No**

(If yes, fill in transfer credit form.)

Department approval		**Date of meeting:**	November 26, 2021
Faculty Council approval		**Date of meeting:**	December 17. 2021
Undergraduate Education Committee (UEC) approval		**Date of meeting:**	February 25, 2022

Learning Outcomes

Upon successful completion of this course, students will be able to:

1. Use proper compositing vocabulary to identify and communicate the different uses of node-based compositing.
2. Combine video and image assets from various sources into fully integrated composites.
3. Use non-destructive node-based compositing methods, in a manner consistent with industry practices.
4. Examine compositing challenges and formulate efficient solutions.
5. Distinguish the roles compositing plays within a production.
6. Apply principles of visual organization, visual language, and theory to visual communication problems.
7. Combine video with computer-generated imagery to create visual effects.
8. Apply ethical principles in information sharing, intellectual property, and media law.

Recommended Evaluation Methods and Weighting *(Evaluation should align to learning outcomes.)*

Assignments:	100%	Project:	%		0%

Details: Assignment 1 (25%): Compositing Fundamentals Exercises. Assignment 2 (25%): Rotoscopy and Keying. Assignment 3 (25%): Matte Painting and Set Extension. Assignment 4 (25%): 3D Integration.

NOTE: The following sections may vary by instructor. Please see course syllabus available from the instructor.

Texts and Resource Materials *(Include online resources and Indigenous knowledge sources. Open Educational Resources (OER) should be included whenever possible. If more space is required, use the Supplemental Texts and Resource Materials form.)*

	Type	Author or description	Title and publication/access details	Year
1.	Textbook	Zwerman S, Okun J	The VES Handbook of Visual Effects: Industry Standard VFX Practices and Procedures	2020
2.				

Required Additional Supplies and Materials *(Software, hardware, tools, specialized clothing, etc.)*

The Foundry Nuke.

Course Content and Topics

Unit 1: Intro to node-based compositing

- VFX and compositing vocab and setup.
- Fundamental concepts of digital imaging, and compositing.
- Digital color theory RGBA.
- Alpha channels and pre-multiplication.
- Math of digital color.
- Alpha channels and merging.
- Vocabulary and node identification.
- Node types and concatenation.
- Compositing 3D arbitrary output variables (AOVs) for animated film.
- Using lighting and technical AOVs.

Unit 2: Rotoscopy and Keying

- Rotoscopy tools.
- Clean plating.
- Green screen keying.
- Garbage mattes.
- Despilling techniques.
- 2D tracking.
- Corner pinning.
- Advanced keying methods.
- Projections and 3D compositing.

Unit 3: Matte painting and set extensions.

- Parallax and 3D.
- Importing 3D assets.

Unit 4: 3D Integration

- 3D tracking, point cloud generation.
- Camera output, and scene scale.
- Compositing 3D renders into live-action footage.