Course Outline

Digital Compositing

COMM 2094 Study Period 2 - 2024

Internal - Magill Campus

University of South Australia

Introduction

Welcome

Welcome to COMM 2094 Digital Compositing.

Digital Compositing familiarises students with the Compositing and Production pipeline. It provides the theory, skills and techniques to produce industry-standard composites in the film environment. Compositers make up the bulk of the workforce of post production companies around the world and are in high demand on all of the blockbuster films today. During the lecture and practical series, students will develop an understanding of key compositing techniques and practices such as colour grade, element removal, tracking and the CGI pipeline. Students will also engage with local industry leaders to further their understanding of professional practice in the visual effects industry. During the practical series, students will develop advanced skills in Nuke and now Unreal Engine which have now become the core software in the Industry today. The assessment tasks will provide students with the opportunity to work to produce a personalised showreel of industry-standard work.

Academic Work Definitions

Internal mode includes face to face/in person components such as lectures, tutorials, practicals, workshops or seminars that may be offered at a University campus or delivered at another location. Courses delivered ininternal mode may also be offered intensively allowing them to be completed in a shorter period of time. Thereis an expectation that students will be physically present for the delivery of face to face/in person teaching andlearning activities.

Lecture

Student information

A lecture is delivery of course content either in person, or online in a virtual classroom, that builds on the course readings and pre-lecture requirements for you and other students in the course. The primary purpose of the lecture is to comprehensively describe and explain course content, ideas or skills to provide a foundation on which students build understanding through extended study. Lectures may also be pre-recorded and embedded in online courses.

All students are expected to have undertaken required readings and assigned activities prior to the lecture.

Tutorial

Student information

A tutorial can be conducted either in person or online in a virtual classroom. A tutorial is a facilitated group discussion, where your tutor leads analyses of issues and/or more detailed explanations related to the topics provided to you in online resources and/or lectures.

All students are expected to be familiar with relevant lecture content and readings prior to a tutorial and to participate actively in the related activities assigned for preparation. Tutorials may include a range of activities, including problem solving, group work, practical activities, and presentations.

Course Teaching Staff

Course Coordinator:	Mr Danny Ward
Location:	UniSA Creative C2-19
Telephone:	+61 8 8302 1982
Email:	Danny.Ward@unisa.edu.au
Staff Home Page:	people.unisa.edu.au/Danny.Ward

* Please refer to your Course homepage for the most up to date list of course teaching staff.

Contact Details

UniSA Creative

Website:	https://www.unisa.edu.au/about-unisa/academic-units/creative/

Additional Contact Details

Tutors

Matthew Phelan	matthew.phelan@unisa.edu.au
Josh Wilkinson	joshua.wilkinson@unisa.edu.au

Course Overview

Prerequisite(s)

There are no prerequisite courses to be completed before this course can be undertaken.

Corequisite(s)

There are no corequisite courses to be completed in conjunction with this course.

Course Aim

To familiarise students with professional practice and industry standards in digital compositing for film.

Course Objectives

On completion of this course, students should be able to:

CO1. Demonstrate an understanding of the visual effects production pipeline

CO2. Gain competence within industry standard software packages such as Nuke

CO3. Work individually or in small teams to produce complex digitally-composited film sequences

CO4. Demonstrate an understanding of the local, national and global visual effects industries

CO5. Demonstrate an understanding of professional practice in the visual effects industry

CO6. Produce a 'showreel' of industry-standard digitally-composited film sequences

Upon completion of this course, students will have achieved the following combination of Graduate Qualities and Course Objectives:

	Graduate Qualities being assessed through the course						
	GQ1	GQ2	GQ3	GQ4	GQ5	GQ6	GQ7
CO1	•		•	•			
CO2	•	•	•				
CO3		•	•	•		•	
CO4					•	•	•
CO5					•	•	•
CO6					•	•	•

Graduate Qualities

A graduate of UniSA:

GQ1. operates effectively with and upon a body of knowledge of sufficient depth to begin professional practice

GQ2. is prepared for life-long learning in pursuit of personal development and excellence in professional practice

GQ3. is an effective problem solver, capable of applying logical, critical, and creative thinking to a range of problems

GQ4. can work both autonomously and collaboratively as a professional

GQ5. is committed to ethical action and social responsibility as a professional and citizen

GQ6. communicates effectively in professional practice and as a member of the community

GQ7. demonstrates international perspectives as a professional and as a citizen

Course Content

Digital Compositing familiarises students with the visual effects industry and production pipeline, and provides the theory, skills and techniques to produce industry-standard composited film sequences. During the lecture series, students will develop an understanding of key compositing techniques and practices. Students will also engage with local industry leaders to further their understanding of professional practice in the visual effects industry. During the practical series, students will develop advanced skills in industry standard digital compositing programs, including colour correction, rotoscoping, keying and tracking. The assessment tasks will provide students with the opportunity to work both individually and in small teams; and produce a personalised showreel of industry-standard work.

Teaching and Learning Arrangements

Lecture	1 hr x 12 weeks
Computer Practical	2 hrs x 12 weeks

Unit Value

4.5 units

Use of recorded material

This course will involve the production of audio and/or video recordings of UniSA students. To protect student privacy, you must not at any time disclose, reproduce or publish these recordings, or related material, in the public domain including online, unless the videoed students give consent for reproduction, disclosure or publication. This requirement is consistent with University statutes, by-laws, policies, rules and guidelines which you agreed to abide by when you signed the Student Enrolment Declaration.

Student recording of learning activities

Students must seek permission prior to recording any UniSA learning activity. See A-56 Policy Student recording of learning activities (https://i.unisa.edu.au/siteassets/policies-and-procedures/docs/academic/a56_student-recording-of-learning-activities.pdf)

Breaches of this Policy contravene the principles of academic integrity, and attract the penalties provided in the Academic Integrity Procedure (https://i.unisa.edu.au/policies-and-procedures/university-policies/).

Learning Resources

Textbook(s)

You will need continual access to the following text(s) to complete this course. Where possible the Library will make the book available for student use. Please check the Library catalogue before purchasing the book(s). The Library will always seek to purchase resources that allow an unlimited number of concurrent users, however availability is dependent on license arrangements with book publishers and platforms. http://www.library.unisa.edu.au

Ganbar, R (2011). *Nuke 101: Professional Compositing and Visual Effects*.

Reference(s)

Online Resources

Linked in Learning (Free with your Unisa login)

Linked In Learning

After Effects 2022 Essential Training

After Effects Principles of Motion Graphics

Houdini Essential Training

Houdini Advanced Motion Graphics

Udemy

After Effects CC 2022 Complete course from Novice to expert

After Effects CC Masterclass : Learn After Effects today

Vehicle Modelling in Houdini Sci Fi Dropship (Free)

Houdini FX Step to Step

SideFX

Houdini Tutorials

Excellent free and paid resources for Houdini

learnonline course site

All course related materials are available on your learnonline course site which you will be able to access from the ‘my Current Studies’ section in myUniSA (https://my.unisa.edu.au).

Access to Previous Courses
You will have access to your previous course sites for a period of 4 years. After this time, the course sites will be archived and will be unavailable.

Note: Course readings provided via the University Library are only made available to current students and staff due to licensing and copyright restrictions. Students may download their course readings while they are enrolled in the course for their personal research purposes only.

Assessment

Academic Integrity

Academic integrity is fundamental to the reputation of UniSA and its staff and students. Academic integrity means all staff and students are committed to producing academic work that accurately reflects authorship, and is created with honesty, trustworthiness, fairness, respect, and responsibility.

The University of South Australia expects students to demonstrate accurately what they have learned so that university qualifications are earned honestly and are trusted and valued by its students and their employers. That means students need to present work that represents what they have learned. Therefore, students must indicate where and how they have used other people's ideas to support their knowledge. Academic integrity requires an honest account of the source of contributions to the work by using correct referencing. Students must not represent the work of others as their own as this does not demonstrate what they have learned. Using another person's work without correct referencing is considered Academic Misconduct.

The approach to academic integrity has many layers.

At the government level, a law exists that specifically states that providing academic cheating services to students of Australian universities is an **offence**, irrespective of whether the service is provided by an Australian or overseas operator (see Tertiary Education Quality and Standards Agency Amendment (Prohibiting Academic Cheating Services) Bill 2019 - https://www.legislation.gov.au/Details/C2020A00078). “Academic cheating services” includes providing or undertaking work for students, where that work forms a substantial part of an assessment task.

The University has policies and procedures to promote academic integrity and manage academic misconduct.More information about academic integrity and what constitutes academic misconduct can be found in the Academic Integrity Policy and Procedure (https://i.unisa.edu.au/policies-and-procedures/university-policies/). One example is that work submitted electronically by students for assessment will be examined for copied and un-referenced text using the text comparison software Turnitin http://www.turnitin.com.

At the course level, your instructor may also provide specific instruction and guidance on whether the use of tools such as translation software, writing aides, and artificial intelligence software is permissible and to what degree in completing learning tasks and assessments. When in doubt, ask your teaching team.

To learn more about academic integrity and how to avoid academic misconduct, please refer to the Academic Integrity Module: https://lo.unisa.edu.au/mod/book/view.php?id=252142

Use of generative artificial intelligence

The assessment tasks for this course require you to demonstrate your learning.

It is important to understand that information generated by GenAI tools, such as ChatGPT, Copilot, and DALL-E, may be unreliable, inaccurate, and incorrect. It is your responsibility to comply with the conditions for each assessment task summarised in the assessment description and that any use of GenAI tools is ethical and responsible and adheres to the assessment conditions.

Use of GenAI tools that extends beyond the stated assessment conditions will be considered a breach of academic conduct, as per the Academic Integrity Policy (AB-69).

Important information about all assessment

All students must adhere to the University of South Australia's procedures about assessment: http://i.unisa.edu.au/policies-and-procedures/codes/assessment-policies/.

Assessment Details

Details of assessment submission and return are listed under each assessment task. Assessment tasks will be returned to you within 15 working days of submission.

Cover sheets

A cover sheet is not required for assessment tasks submitted via learnonline, as the system automatically generates one.

If the Course Coordinator allows submissions in hard copy format, you will be required to attach an Assignment Cover Sheet which is available on the learnonline student help (https://asklearnonline.unisa.edu.au/app/answers/detail/a_id/2222/kw/coversheet) and in myUniSA.

Assessment Descriptions

Assessment 1

Single	15% of Course Total	Objectives being assessed:CO1, CO2, CO3

Title	Team work	Length	Duration	Due date (Adelaide Time)	Submit via	Re-Submission	Re-Marking
Assignment 1 - Roto and Colour Grade	No	675 words equivalent	N/A	31 Mar 2024, 11:59 PM	learnonline	Yes	Yes

Further information on re-marking and re-submission is available in the academic policy, AB-68 P4 Re-marking and Re-submission Procedure

DIGITAL COMPOSITING COMM 2094

PROJECT 1: Basic Composite Aim:
This project allows you to create a composited shot in Nuke and explore the Colour and Roto tools to create an aesthetic shot that shows off a location to best effect.

Task:
Select one of the 4k pieces of footage from the Week 1 Assessment 1 folder from the course website
Use the colour grade tools to correct the footage to give a “tourist” style colour treatment. This could then be used to advertise that location to visitors to the country to make it look as attractive as possible.
You will also need to rotoscope an element in the shot to colour-correct and grade separately in order to make it stand out.
The final shot will go for a minimum of 10 seconds and a maximum of 20 seconds
Create a digital presentation running through the process from start to finish. Submission Requirements:
A final rendered 10 second video (H264/H265 codec, .mp4 file) at 1920 x 1080 pixels
A digital presentation running through the assignment process, with a shot breakdown of your final output.
Examples of the digital presentation can be found on the course websites under the assessment tab

Assessment Criteria:
Quality of Rotoscoping
Quality of lighting & colour
Quality of Mood / Atmosphere

Quality of final render

Late submission of assessment tasks
Late submission of assessment tasks
This course will result in a penalty unless the student can provide evidence of unexpected or exceptional

circumstances as defined by the UniSA Assessment AB68-68: Variations to Assessment Procedure P2 G.

The penalty for late submissions will be:
1. a deduction of 5% of the available marks, for each day (or part thereof) that the assignment is late up to a maximum of 5 days.
2. assignments that are more than 5 days late will not be assessed and will be assigned a zero grade inclusive of non-graded pass work.

This project is worth 15% of your final grade for the course
This project is due Monday, Week 5, March 29th 2024 by 11:59pm via LearnOnline

Assessment 2

Single	35% of Course Total	Objectives being assessed:CO1, CO2, CO3

Title	Team work	Length	Duration	Due date (Adelaide Time)	Submit via	Re-Submission	Re-Marking
Assignment 2 - Complex Composite	No	1575 words equivalent	N/A	28 Apr 2024, 11:59 PM	learnonline	Yes	Yes

Further information on re-marking and re-submission is available in the academic policy, AB-68 P4 Re-marking and Re-submission Procedure

DIGITAL COMPOSITING COMM 2094
PROJECT 2: Complex Composite Aim:

This project allows you to create a composited shot in Nuke and explore the tools in order to create a complex shot.

Task:
Select 2 live action background plates from the Assignment 2 resources in Week 4 of the course.
Match the lighting and colour ranges across the two shots to create a consistent feel.
Use the colour tools (Colour correct & grading) in Nuke to create an atmosphere.
From the topic list below, select 2 items to implement into the project, one for each shot
Convert the Output footage from 4k to HD video.
Create a digital presentation running through the process from start to finish with screenshots.

Topic List:
Rotoscoping
RotoPaint
Tracking (2d or 3d)
Keying
Background Replacement for example, the sky

Submission Requirements:
A final rendered 10-second video containing both shots, appx 5 seconds each (H264/H265 codec, .mp4 file) at 1920 x 1080 pixels
A digital presentation running through the assignment process, with a shot breakdown of your final output with screenshots. Examples of the digital presentation can be found in the Assignments section of the Course website

Assessment Criteria:
Quality of Composition
Quality of lighting & colour
Quality of presented topics
Quality of final render

Late submission of assessment tasks
This course will result in a penalty unless the student can provide evidence of unexpected or exceptional circumstances as defined by the UniSA Assessment AB68-68: Variations to Assessment Procedure P2 G.

The penalty for late submissions will be:
1. a deduction of 5% of the available marks, for each day (or part thereof) that the assignment is late up to a

maximum of 5 days.
2. assignments that are more than 5 days late will not be assessed and will be assigned a zero grade inclusive of non-graded pass work.

This project is worth 35% of your final grade for the course
This project is due Sunday, April 28th, 2024 by 11:59 pm via LearnOnline

Assessment 3

Single	50% of Course Total	Objectives being assessed:CO3, CO4, CO5, CO6

Title	Team work	Length	Duration	Due date (Adelaide Time)	Submit via	Re-Submission	Re-Marking
Assignement 3 - Showreel	No	2250 words equivalent	N/A	26 May 2024, 11:59 PM	learnonline	Yes	Yes

Further information on re-marking and re-submission is available in the academic policy, AB-68 P4 Re-marking and Re-submission Procedure

DIGITAL COMPOSITING COMM 2094
PROJECT 3: Showreel

Aim:
This project allows you to create a personal showreel exploring various compositing and tracking techniques.

Task:
Create a 40-60 second showreel including at least three of the following topics:
Rotoscoping
Compositing
Keying
Colour Correction
2D Tracking
Camera Tracking
Camera Projections

Submission Requirements:
A 40-60 second showreel (H264 codec, .mov file), rendered at least HD video, including final shots and shot breakdowns of your work.
You can use revised versions of the first two assignments in your reels.
There is no digital presentation required for this assignment

Assessment Criteria:
Consideration of the final edited reel
Use of appropriate music
Quality of presented topics, such as:
Rotoscoping
Compositing
Keying
Colour Correction
2D Tracking Camera
3D Tracking
Camera Projection
Quality of shot breakdowns

Late submission of assessment tasks
This course will result in a penalty unless the student can provide evidence of unexpected or exceptional circumstances as defined by the UniSA Assessment AB68-68: Variations to Assessment Procedure P2 G.

The penalty for late submissions will be:
1. a deduction of 5% of the available marks, for each day (or part thereof) that the assignment is late up to a maximum of 5 days.
2. assignments that are more than 5 days late will not be assessed and will be assigned a zero grade inclusive of non-graded pass work.

This project is worth 50% of your final grade for the course
This project is due Sunday, May 26th, 2024 by 11:59 pm via LearnOnline

Feedback proformas

The feedback proforma is available on your course site.

Additional assessment requirements

There are no additional assessment requirements identified for this course.

Penalties for late submission

Submission and return of assessment tasks

Late submission of assessment tasks
Late submission of assessment tasks in this course will result in a penalty unless the student can provide evidence of unexpected or exceptional circumstances as defined by Section 7.8 in the Assessment Policies and Procedures Manual. The penalty for late submissions will be:
1. a deduction of 5% of the available marks, for each day (or part thereof) that the assignment is late up to a maximum of 5 days.
2. assignments which are more than 5 days late will not be assessed and will be assigned a zero grade inclusive of non-graded pass work.

Penalties for late submission
Late submission of assessment tasks
Late submission of assessment tasks in this course will result in a penalty unless the student can provide evidence of unexpected or exceptional circumstances as defined by Section 7.8 in the Assessment Policies and Procedures Manual. The penalty for late submissions will be:
1. a deduction of 5% of the available marks, for each day (or part thereof) that the assignment is late up to a maximum of 5 days.
2. assignments which are more than 5 days late will not be assessed and will be assigned a zero grade inclusive of non-graded pass work.

Exam Arrangements

This course does not have an exam.

Deferred Assessment or Examination

Deferred assessment or examination is not available for this course. APPM 7.5

Supplementary Assessment

Supplementary assessment or examination offers students an opportunity to gain a supplementary pass (SP) and is available to all students under specific conditions unless supplementary assessment or examination has not been approved for the course.

Specific conditions and further information is available in the Variations to Assessment Procedure. http://i.unisa.edu.au/policies-and-procedures/codes/assessment-policies/

Supplementary assessment

Supplementary assessment or examination offers students an opportunity to gain a supplementary pass (SP) and is available to all students under the following conditions unless supplementary assessment or examination has not been approved for the course:

if the student has achieved a final grade between 45-49 per cent (F1) in a course
if a student who has successfully completed all of the courses within their program, with the exception of two courses in which they were enrolled in their final study period, a supplementary assessment or examination may be granted where the final grade in either or both of these courses, is less than 45 percent (F1 or F2) and all assessments in the courses were attempted by the student. Supplementary assessment will not be available for a course under investigation for academic integrity until the investigation is completed, and determined that it did not constitute academic misconduct.

More information about supplementary assessment is available in section 7.5 of the Assessment Policy and Procedures Manual.

Special Consideration

Variations to assessment tasks

Details for which variation may be considered are discussed in the Variations to Assessments Procedure (http://i.unisa.edu.au/policies-and-procedures/codes/assessment-policies/). Variation to assessment in unexpected or exceptional circumstances should be discussed with your course coordinator as soon as possible.

More information about variation to assessment is available in the Variations to Assessments Procedure (http://i.unisa.edu.au/policies-and-procedures/codes/assessment-policies/).

Students with disabilities or medical conditions please refer to **Students with disabilities or medical conditions**.

Students with disabilities or medical conditions

Students with disabilities or medical conditions or students who are carers of a person with a disability may be entitled to a variation or modification to standard assessment arrangements. See the Variations to Assessment Procedure at: http://i.unisa.edu.au/policies-and-procedures/codes/assessment-policies/ and Policy C7 Students with Disability at: https://i.unisa.edu.au/policies-and-procedures/university-policies/corporate/c-7/

Students who require variations or modifications to standard assessment arrangements must first register for an Access Plan with the UniSA Access & Inclusion Service. It is important to contact the Access & Inclusion service early to ensure that appropriate support can be implemented or arranged in a timely manner.

Students who wish to apply for an Access Plan must book an appointment with a UniSA Access & Inclusion Advisor by contacting Campus Central or via the Online Booking System in the Student Portal. For more information about Access Plans please visit: https://i.unisa.edu.au/students/student-support-services/access-inclusion/

Once an Access Plan has been approved, students must advise their Course Coordinator as early as possible to ensure that appropriate supports can be implemented or arranged in a timely manner.

Students are advised there are also strict deadlines to finalise Access Plan arrangements prior to examinations. Further information is available at: http://i.unisa.edu.au/campus-central/Exams_R/Before-the-Exam/Alternative-exam-arrangements/

Action from previous evaluations

This is the third iteration of the course.

Unplanned learnonline outages

The alteration to assessment due dates and communication strategy is designed to minimise the impact of major unplanned learnonline system service outages on students and staff. They should only be considered when an unplanned outage occurs within 3 days of an assessment activity.
Any implementation or revisions are at the discretion of the course coordinator.

Outage Duration	Alteration to due date	Alteration to examination
Less than 1 hour	Nil impact	Nil impact
Between 1 and 4 hours	consider extension	Nil impact
Between 4 and 24 hours	24 hour extension	Consider when marking
Longer than 24 hours	48 hour extension	Consider when marking

Any changes to assessment activity will be communicated to you from your Course Coordinator via:

- Email
- SMS message

Course Calendar

Study Period 2 - 2024

	Weeks	Topic	Practical	Assessment Details (Adelaide Time)	Public Holidays
1	26 February - 3 March	Week 1 - Course Introduction	Week 1 - Introduction to Nuke and the tools		
2	04 - 10 March	Lecture - Colour Theory	Week 2 - Colour Correction and Grading in Nuke		
3	11 - 17 March	Lecture - Rotoscoping	Week 3 - Rotoscoping tools and animation in Nuke		Adelaide Cup Day 11 Mar 2024
4	18 - 24 March	Lecture - 2D Tracking	Week 4 - 2d tracking tools for live action video in Nuke		
5	25 - 31 March	Lecture - 3d Camera tracking	Week 5 - 3d tracking tools for live action video in Nuke	Assignment 1 - Roto and Colour Grade due 31 Mar 2024, 11:59 PM	Good Friday 29 Mar 2024
6	01 - 7 April	Lecture - Showreels	Studio Session		Easter Monday 01 Apr 2024
	08 - 14 April	Mid-break			
	15 - 21 April	Mid-break			
7	22 - 28 April	Lecture - Keying and greenscreens and Introduction to Assignment 3	Week 6 - Keying and Greenscreen extractions	Assignment 2 - Complex Composite due 28 Apr 2024, 11:59 PM	Anzac Day 25 Apr 2024
8	29 April - 5 May	Lecture - Nuke 3D System and Tools	Week 7 - Nuke 3D System and Tools		
9	06 - 12 May	Lecture - Camera Projections	Week 8 - Camera Projections		
10	13 - 19 May	Lecture - Advanced 3d Camera Tracking	Week 8 - Advanced Tracking tools in Nuke		
11	20 - 26 May	No Lecture	Studio Session	Assignement 3 - Showreel due 26 May 2024, 11:59 PM	
12	27 May - 2 June	No Lecture	Studio Session		