

# Lingnan University

## CLD9005 Colour Science and Digital Applications

### Course Description

This course introduces a scientific approach to understanding colours as well as the current digital technology for mastering colours. Apart from the theoretical and instrumental bases for analyzing colours, emphasis is placed on practical applications of digital colour technology in areas such as photography and publishing. Students will also acquire skills in relevant software and equipment.

### Learning Outcomes

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

1. Understand relevant scientific principles of colour.
2. Identify and select digital colour technologies for practical applications.
3. Apply relevant software and equipment for colour-related tasks.

### Measurement of Learning Outcomes

1. Assessed participation in classroom and laboratory sessions measures students participation in the course based on their attendance as well as their contribution in class discussion.
2. Introduced in lectures and demonstrated in laboratory sessions, students understanding of the scientific principles of colour will be tested through laboratory exercises and a written examination. Both the theoretical and practical aspects are addressed in the examination.
3. A study project will provide students the opportunity to gain experience on practical applications of digital colour technology. The project will test students on the scientific principles behind the technology of a digital colour application and require them to assess the relevance of the technology to the application.
4. Students are required to present their findings in the form of written reports and oral presentations. The report will be assessed for: 1) clarity and logic, 2) organisation, 3) methodology and rigor, and 4) analysis of results. The oral presentation will be assessed for: 1) organisation, 2) informativeness, 3) quality of delivery and 4) response to questions.
5. Students will also learn and apply skills in software and equipment through a series of laboratory exercises which form a major part of the continuous assessment. Assessment of these exercises will measure students ability to apply relevant equipment and software as well as their understanding of the scientific basis of these tools.

### Prerequisites

None

### Required Textbooks

B. Fraser, C. Murphy and F. Bunting	Real World Color Management: Industrial-Strength Production Techniques (Second Edition)	Peachpit Press, 2005
P. Rivard	Digital Color Correction	Thomson, 2006

# Assessment

Examination (40%)

Continuous assessment (60%)

- Class Attendance and Participation 5%
- Laboratory Exercises and Quizzes 30% (Late submission of assignments will be subject to a penalty of 0.2% per day)
- [Project](#) 25%

**Caution: Academic dishonesty, including but not limited to plagiarism, will be subject to disciplinary actions.**

## Teaching schedule

DCC = Digital Color Correction, RWCM = Real World Color Management

Week	Lab (SEK105)	Lecture (MBG12)
1	<a href="#">Introduction</a>	<a href="#">RWCM1. What is Colour?</a>
2	DCC1: <a href="#">Introduction</a>	<a href="#">RWCM1. What is Colour?</a>
3	DCC2: <a href="#">Contrast (image)</a> <b>Exercise:</b> Contrast (5%)	<a href="#">RWCM1. What is Colour?</a>
4	DCC3: <a href="#">Balance (image)</a> <b>Exercise:</b> Balance (5%)	<a href="#">RWCM2. Computers and Colour (gamut video)</a>
5	DCC4: <a href="#">Sharpness and Detail (image)</a>	<a href="#">RWCM3. Colour Management</a>
6	<b>Quiz 1</b> (5%) (RWCM1, DCC1-4) <a href="#">DCC5: Believable Colours</a> <b>Exercise:</b> Sharpness (5%)	<a href="#">RWCM4-5. All About Profiles/Measurement, Calibration and Process Control</a> <a href="#">RWCM6. Building Display Profiles</a>
7	<a href="#">DCC6: Image Evaluation (image) (form)</a>	<a href="#">i1 Display Pro demo</a> <a href="#">TFT LCD hardware video</a>
8	<a href="#">DCC7: The Plan of Attack (image) (before form)</a> <b>Exercise:</b> Image adjustment (5%) <a href="#">(image)</a>	<a href="#">RWCM7. Building Input Profile</a> <a href="#">Video for camera profiling with x-rite color passport</a>
9	<a href="#">DCC8: Masked and Invisible (image)</a>	<a href="#">RWCM8. Building Output Profiles</a>
10	<b>Quiz 2</b> (5%) (RWCM2-5, DCC5-7) <a href="#">DCC9: Tool Work (image)</a>	<a href="#">RWCM12. The Adobe Common Colour Architecture</a> <a href="#">iPhone 4 display profile</a> <a href="#">Fujifilm Crystal Archive profile</a>
11	<a href="#">Ching Ming</a>	Project Consultation
12	<a href="#">DCC10: Special Treatments (image)</a>	Project presentation
13	Project presentation	Project presentation
14	Project presentation	
	<b>Examination</b>	

### Important Notes:

- (1) Students are expected to spend a total of 9 hours (i.e. 3 hours of class contact and 6 hours of personal study) per week to achieve the course learning outcomes.
- (2) Students shall be aware of the University regulations about dishonest practice in course work, tests and examinations, and the possible consequences as stipulated in the Regulations Governing University Examinations. In particular, plagiarism, being a kind of dishonest practice, is "the presentation of another person's work without proper acknowledgement of the source, including exact phrases, or summarised ideas, or even footnotes/citations, whether protected by copyright or not, as the student's own work". Students are required to strictly follow university regulations governing academic integrity and honesty.
- (3) Students are required to submit writing assignment(s) using Turnitin.
- (4) To enhance students' understanding of plagiarism, a mini-course "Online Tutorial on Plagiarism Awareness" is available on <https://pla.ln.edu>