Applied Studies (APST) 555

Architectural Design: Lighting (Revision 1)

Status:	Replaced with new revision, see the **course listing** for the current revision
Delivery mode:	**Individualized study online**. Delivered via Brightspace.
Credits:	3
Area of study:	Architecture
Prerequisites:	Enrolment in the Graduate Diploma - Architecture program, or referral from the Canadian Architectural Certification Board (CACB) for individuals with a professional degree in architecture from a university outside Canada.
Precluded:	**ARCH 525**
Faculty:	**Faculty of Science and Technology**
Notes:	For those students interested in pursuing a career as a registered architect, this course contributes to the **RAIC Syllabus Diploma**.

Credit may be transferred for previous work considered equivalent.

Overview

Applied Studies 555: Architectural Design: Lighting introduces you to the art and science of light and lighting. It discusses the interaction of light, lighting application technologies, and their physiological and psychological impact on people. This course also focuses on visual characteristics, interrelationships with adjacent systems, performance, and cost efficiency.

Outline

Part 1 – Human Factors in Lighting

- Unit 1 – Lighting Spaces: An Overview
- Unit 2 – Light and Perception
- Unit 3 – Lighting Program Requirements: Guides, Standards, and Research for Creative Lighting Solutions

Part 2 – Lighting Design and Application

- Unit 4 – Lighting Design Principles and Process
- Unit 5 – Applied Lighting Design
- Unit 6 – Quantitative Analysis in Lighting Design

Part 3 – Lighting Technology

- Unit 7 – Daylighting
- Unit 8 – Electric Lighting Sources
- Unit 9 – Electric Lighting Luminaires

Learning outcomes

Upon successful completion of this course, you should be able to

- identify relevant regulations and guidelines for a given lighting project.
- determine lighting design needs through quantitative analysis.
- design lighting plans to meet clients' psychological and physiological needs.
- develop cost-effective lighting design plans following sustainable design principles.

Evaluation

To **receive credit** for APST 555, you must

- complete all four assignments and achieve a grade of at least 50% on each assignment, and
- achieve a course composite grade of at least 67%.

Note: If you wish to be certified by the CACB, you must achieve and maintain a final grade point average of 2.3 or greater.

The weighting of the composite grade is as follows:

Activity	Weight
Assignment 1 (Units 1–3)	25%
Assignment 2 (Units 4–6)	25%
Assignment 3 (Units 7–9)	25%
Assignment 4 (Units 1–9)	25%
Total	**100%**

Materials

Digital course materials

Links to the following course materials will be made available in the course:

Grondzik, W. T., & Kwok, A. G. (2019). *Mechanical and electrical equipment for buildings* (13th ed.). Wiley.

Karlen, M., Spangler, C., & Benya, J. R. (2017). *Lighting design basics* (3rd ed.). Wiley.

Important links

- **RAIC Centre for Architecture**
- **Graduate Diploma in Architecture**
- **Courses**
- **Fees and Funding**

Athabasca University reserves the right to amend course outlines occasionally and without notice. Courses offered by other delivery modes may vary from their individualized study counterparts.

Opened in Revision 1, July 15, 2025

Updated March 10, 2026