MCN v1.1.0

The moderncLassnotes Class & Package

User Manual & Architecture Guide for Class Notes Package

Professor: Modern Class Notes Maintainers | **Term:** Release 2026 | Open Source TeX Initiative

Contents

1 Introduction

The `moderncLassnotes` package and document class provides a modern, highly aesthetic, and open-source LaTeX framework designed specifically for university professors, lecturers, and educators. It enables effortless creation and distribution of lecture notes, student handouts, and problem worksheets.

[KEY] Key Takeaways

Key highlights of `moderncLassnotes`:

- **Four Specialized Modes**: `notes` (full course manuals), `handout` (1–2 page lecture summaries), `worksheet` (homeworks and solution keys), and `chapternotes` (chapter-based notes and reading summaries).
- **Curated Color Palettes**: Switch between 8 themes (`ocean`, `nord`, `midnight`, `emerald`, `burgundy`, `amethyst`, `purple`, `mono`) with a single class option.
- **Zero Mandatory Heavy Dependencies**: Native TeX/LaTeX box engine ensuring maximum portability across TeX Live, MiKTeX, and Overleaf.
- **Lecture & Chapter Tracking**: Automated lecture header banners and chapter headers with optional objectives via `\lecture`, `\chapter`, and `\subchapter`.

2 Class Options & Configuration

Load the class in your LaTeX document header:

Loading the Class

```
\documentclass[mode=notes, palette=ocean, fontsize=11pt, font=default
    ]{moderncLassnotes}
```

2.1 Available Class Keys

Key	Values
`mode`	`notes`, `handout`, `worksheet`, `chapternotes`
`palette`	`ocean`, `midnight`, `nord`, `emerald`, `burgundy`, `amethyst`, `purple`, `mono`
`fontsize`	`10pt`, `11pt`, `12pt`
`font`	`default`, `palatino`, `charter`, `sans/helvet`, `kpfonts`, `pagella`, `sourceserif`, `fira`, `libert`
`official`	`true`, `false`
`showsolutions`	`true`, `false`
`parskip`	`true`, `false`

Table 1: Class options and parameter values

3 Course Metadata Commands

Specify your course metadata in the document preamble:

Metadata Setup

```
\course{Data Structures & Algorithms}
\coursecode{CS 201}
```

```
\professor{Dr. Alex Morgan}
\institution{Department of Computer Science}
\term{Fall 2026}
\docsubtitle{Comprehensive Lecture Notes}
\title{CS 201: Class Notes}
```

4 Lecture & Chapter Tracking Systems

Use the `\lecture` command to divide course notes into distinct lecture sessions:

Lecture Macro

```
\lecture[September 2, 2026]{1}{Introduction to Algorithm Analysis}
```

For chapter-based notes (`mode=chapternotes`), use `\chapter` and `\subchapter`:

Chapter Macro with Objectives

```
\chapter{1}{Digital Systems and Binary Numbers}{%
  Understand binary numbers.,%
  {Convert between binary, octal, decimal, and hexadecimal.},%
  Form complements and parity bits.%
}

\subchapter{2}{Binary Numbers}
```

5 Pedagogical Environments

[DEF] Definition 1 (Mathematical Callout Environments)

`moderncnotes` provides structured environments for mathematical and academic content:

- `theorem`, `lemma`, `proposition`, `corollary`, `proof`
- `definition`, `example`, `remark`, `warning`, `tip`, `takeaways`
- `exercise`, `solution`, `codebox`

[EX] Example 1 (Sample Theorem Environment)

```
\begin{theorem}[Euler's Identity]
For any real number $\theta$, $e^{i\theta} = \cos\theta + i\sin\
    theta$.
\end{theorem}
```

6 Open-Source & CTAN Distribution Guidelines

To distribute this package under an open-source initiative:

1. Maintain the LPPL 1.3c / MIT dual licensing terms in `LICENSE`.
2. Provide compiled sample PDFs in `examples/` for GitHub previews.

3. Execute `make ctan` to bundle a clean `.zip` release file ready for CTAN submission.