

# The uol-physics-report class\*

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## Abstract

This document describes the usage of the `uol-physics-report` document class.

The document class is based on an initial laboratory report written by me which I have been asked to share with other students at my university. The laboratory report class is mainly optimized for reports written during the Basic Laboratory Course for first semester students of physics at the Carl von Ossietzky University of Oldenburg. Therefore, there are some macros available for generating the titles and headers of every page.

## 1 Introduction

Writing a laboratory report is not easy as a first semester who is learning to use L<sup>A</sup>T<sub>E</sub>X in a professional setting. Furthermore, students need to write their laboratory reports with consistency and predefined formatting. To help with this, the class uses some packages like `siunitx` to help with the correct display of results and formatting of tables

## 2 Usage

### 2.1 General

`\rom {⟨number⟩}` prints out an uppercase roman letter number. The input argument is a positive integer excluding zero.

### 2.2 Report Setup

This section contains the macros used to set up the general report texts like headers and such. You may want to put those commands into a `header.tex` file since those values never change.

`\parner      \partnerOne {⟨firstName⟩} {⟨lastName⟩} {⟨matriculationNumber⟩} {⟨eMailAddress⟩}`  
Sets one of many partners participating in the protocol

`\module      \module {⟨number⟩} {⟨title⟩}` allows setting the module title and number  
which is printed in the file header

`\tutor      \tutor {⟨name⟩}` sets the name of the tutor who is present during the exper-

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\*This document corresponds to `uol-physics-report` v0.1, dated 2022/12/13.

iments

`\supervisor`     `\supervisor {⟨name⟩}` sets the name of the supervisor who is present during the experiments

`\group`        `\group {⟨number⟩}` sets the number of the group the two partners are in

`\semester`        `\semester {⟨semester⟩}` sets the semester in which the module takes place

### 3 Implementation

`\rom` The macro `\rom {⟨number⟩}` takes the supplied number and prints out the upper-case roman number

```
1 \newcommand{\rom}[1]{\uppercase\expandafter{\romannumeral #1}\relax}
```

`\partner` `\partner {⟨firstName⟩} {⟨lastName⟩} {⟨matriculationNumber⟩} {⟨eMailAddress⟩}` takes the name, matriculation number and email address of a partner and sets it in a way the simlat to how the author command works.

```
2 \newcommand{\partner}[4]{%%
3   \addtocounter{partnerCounter}{1}
4   \PartnerFirstNames(\value{partnerCounter})={#1}
5   \PartnerLastNames(\value{partnerCounter})={#2}
6   \PartnerEmails(\value{partnerCounter})={#3}
7   \PartnerMatriculationNumbers(\value{partnerCounter})={#4}
8 }
```

`\module` `\module {⟨number⟩} {⟨title⟩}` uses the same structure as the author command

```
9 \newcommand{\module}[2]{
10   \renewcommand{\@moduleNumber}{#1}
11   \renewcommand{\@moduleName}{#2}
12 }
13 \newcommand{\@moduleNumber}{}
14 \newcommand{\@moduleName}{}

\ tutor \tutor {⟨name⟩} uses the same structure as the author command
15 \newcommand{\tutor}[1]{
16   \renewcommand{\@tutor}{#1}
17 }
18 \newcommand{\@tutor}{}

\supervisor \supervisor {⟨name⟩} uses the same structure as the author command
19 \newcommand{\supervisor}[1]{
20   \renewcommand{\@supervisor}{#1}
21 }
22 \newcommand{\@supervisor}{}

\group \group {⟨number⟩} uses the same structure as the author command
23 \newcommand{\group}[1]{
24   \renewcommand{\@group}{#1}
25 }
26 \newcommand{\@group}{}

\semester \semester {⟨semester⟩} uses the same structure as the author command
27 \newcommand{\semester}[1]{
```

```

28   \renewcommand{\@semester}{#1}
29 }
30 \newcommand{\@semester}{}

\maketitle \maketitle creates a title page for the laboratory report
31 \renewcommand{\maketitle}{%
32 \begin{titlepage}
33   \begin{center}
34     \singlespacing
35     \topskip0pt
36     \vspace*{\fill}
37     \pagenumbering{Roman}
38     {\Large \@moduleName \ -- \@semester }\\
39     \vspace{4em}
40     {\huge \textsc{\thetitle}}\\
41     \vspace{4em}
42     {\Large \thedate}\\
43     \vspace{0.5em}
44     {\Large Gruppe \@group}\\
45     \vspace{3em}
46     \begin{tabular}[t]{c}{c@{\extracolsep{8em}}c}
47       {\Large\textbf{Betreuer}} & {\Large\textbf{Tutor}} \\
48       {\large \@supervisor} & {\large \@tutor} \\
49     \end{tabular}\\
50     \vspace{3em}
51     {\Large\textbf{Gruppenmitglieder}} \\~\\
52     \multido{\iP=1+1}{\value{partnerCounter}}{%
53       {\large\textit{\arrayx{PartnerFirstNames}(\iP) \arrayx{PartnerLastNames}(\iP)}} \\ \vspace{0.5em}
54       Matrikelnummer: \arrayx{PartnerMatriculationNumbers}(\iP) \\ \vspace{0.5em}
55       \href{mailto:\arrayx{PartnerEmails}(\iP)}{\arrayx{PartnerEmails}(\iP)} \\ \vspace{1.5em}
56     }
57     \vspace*{\fill}
58     \thispagestyle{empty}
59     \newpage
60   \end{center}
61   \tableofcontents
62 \end{titlepage}
63 \pagenumbering{arabic}
64 }

```