# The ufrgscca, and associated, Packages Version 1.0.4 (extended documentation)

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#### Abstract

This bundled is aimed at producing undergraduate students final work/report at UFRGS/EE (Engineering School at the Federal University of Rio Grande do Sul), closely following ABNT rules (Brazilian Association for Technical Norms). It is composed of a main class, ufrgscca, and a set of auxiliary packages, some of which can be used independently.

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# 1 Introduction

ABNT rules can be quite challenging some times (read: bibliography style/references) and sometimes just odd (line spacing, front matter, page layout), nevertheless it is a  $Brazilian\ Standard$  for typography whose students at UFRGS should grow cherished to follow.

In short, as of version 1.0.4 the bundle is composed of a class, ufrgscca (based on the standard LaTeX2e report class), which pre-loads all other, as needed, packages: ufrgscca-abnt, ufrgscca-core, ufrgscca-cover, ufrgscca-forms, ufrgscca-gen, ufrgscca-lists, ufrgscca-curr, ufrgscca-coord, ufrgscca-ppc. N.B.: This bundle requires a quite recent LaTeX2e kernel, at least as recent as June 2022, which allows to declare package options using the new key = value system and declare commands with \NewDocumentCommand, out-of-the-box.

### 1.1 Current Version

For the sake of the "maintainer's sanity", since this is a bundle, all files are saved with the same version (bundle version), with two exceptions: ufrgscca-curr.sty ufrgscca-ppc.sty which are less tested than the others, and somewhat in what one would call 'beta' state. Better said, all files are version 1.0.4, except ufrgscca-curr and ufrgscca-ppc whose versions are 1.0.4beta.

# 2 ufrgscca Class

The following packages are always pre-loaded: etex, etoolbox, Imodern, fontenc (T1), inputenc (utf8), silence, ufrgscca-abnt, ufrgscca-gen, ufrgscca-cover, ufrgscca-core, hyperref and (if it exists) a local.tex file.

Other set of auxiliary packages are also pre-loaded, depending on the class options used, and finally it loads (normally) the *report* class (the exception being if one uses the dctools option).

Being based on the report class, one can use all class options one would with a report, plus the ones listed below.

## 2.1 Class Options

tocdepth use: tocdepth = (number), whereas (number) indicates the deepest sectioning to appears in the Table of Contents (0 being the top section, which is \chapter for report based classes, 1 being \section, and so on.) The default value being 3 (\subsubsection).

secdepth use: secdepth = (number), whereas (number) indicates the deepest sectioning to be numbered. (0 being the top section, which is \chapter for report based classes, 1 being \section, and so on.) The default value being 4 (\paragraph).

english the default language being Portuguese, this option changes locale to English.

brazilian in some rare cases (to be further investigated) babel seems to get confused about which language is active, this "shouldn't be necessary" but one can explicitly tell babel to use THIS language (which should, otherwise, be the default one).

relnum by default, figures, tables, etc. are numbered as a continuous series. With this switch, those lists are reset at each chapter, e.g. Figure 5.1 instead of Figure 23.

openright in case of printed material, this will assure that a \chapter always starts at an odd page, which is relevant in case of printing out (double sided) the document.

oneside in case the document will be printed in single side sheets, otherwise it's assumed a two-sided printing.

strict-abnt to assure asymmetric margins, as defined by ABNT: inner ones greater than outer ones, which matters if you are going to print the doc and make a book of it, but makes it odd to look at in a computer screen, reason by which the current default setting is for symmetric margins (same text width).

"pre-text" elements, like "list of..." will be inserted in the "table of contents".

\*timesroman\* will set the default font to Roman (using the obsolete mathptmx package, based on a free replacement of the proprietary Times New Roman (by Microsoft) and Times Roman (By Adobe)) instead of the default Latin Modern Roman font. As a side effect, the package <code>microtype</code> isn't loaded (can't be used), resulting in a worst overall layout. NB. The alternative (newer and maintained) packages newtxtext/newtxmath can't be used due to some packages incompatibilities.

repeatfields in case of authors with multiple publications, their names will be repeated for each entry. In the default setting the author's name is written only in the first entry, and replaced by underscores in the other entries.

xlists this will load the ufrgscca-lists package, for the definition of new floats/lists.

this will load a series of packages, which can be handy when writing Engineering reports: relsize, keyval, graphicx, mathtools, mathrsfs, amsfonts, amssymb, empheq, amsthm, extarrows, mathfixs, bigdelim, circuitikz, steimenz and tikz libraries: fit, math, calc, shapes.geometry, shapes.misc, shapes.multipart, graphs, 3d, positioning, shadows, babel. One is advised to look after each package documentation (ctan.org) for further information.

report in case the doc is just a class assignment with, possibly, many co-authors. It changes mainly the front matter, which is simplified (no referral page, for instance).

internship in case the doc is an internship report.

forms in the process of submitting a student final work/report, there is a series of forms to be submitted, this allows the customization of said forms in a simple way.

chapternopagenum to suppress the page numbers at chapters begin.

nomicrotype in some rare cases, microtype might hurt page layout, this allows the suppression of microtype.

showframes for layout proof only, it will draw frames around each page main parts.

showlabels it will put a reference mark in each label created, and print out it's name.

nofontwarning in case of ufrgscca-ppc is loaded, it will suppress some font related warnings.

nolocal this will suppress the loading of any local.tex file, which would, otherwise, be

loaded.

dctools this will change page layout and base class to article, it is meant to document the class itself.

texlive this is a reserved key, in case some workaround for texlive is needed.

overleaf this is a reserved key, in case some workaround for overleaf is needed.

miktex this is a reserved key, in case some workaround for miktex is needed.

# 2.2 Class Declared Commands

\autonameref \annexref \autoannexref

```
\verb|\autonameref| [\langle \texttt{sep} \rangle] {\langle \texttt{label} \rangle} {|\langle \texttt{spc} \rangle} ]
```

 $\annexref {\langle label \rangle}$ 

 $\arrowvert autoannexref [\langle sep \rangle] {\langle label \rangle} [\langle spc \rangle]$ 

The hyperref package, sometimes, gets the \autoref name wrong (when referencing an annex), therefore the \annexref { $\langle label \rangle$ } will assure the correct annex name is used.

\autonameref { $\langle label \rangle$ } produces an entry of the form '\autoref { $\langle label \rangle$ }  $\langle sep \rangle$  \nameref { $\langle label \rangle$ }  $\langle spc \rangle$ '

\autoannexref { $\langle label \rangle$ } produces an entry of the form '\annexref { $\langle label \rangle$ }  $\langle sep \rangle$  \nameref { $\langle label \rangle$ }  $\langle spc \rangle$ '

The default  $\langle sep \rangle$  being a comma, and the default  $\langle spc \rangle$  being empty space.

## 2.3 Class Known Hooks

\miktexHack \overleafHack \livetexHack \miktexHack

\overleafHack \livetexHack

In case some workaround is needed due an unexpected error (when upgrading packages/TEXsystem) the class "knows" about those three hooks. They will be executed if, and only if, they are user defined and the corresponding package option is used, i.e., for example, for the hook \miktexHack to be used/called by the class ufrgscca, one has to: a) defined it and b) use the class option miktex.

# 3 <u>ufrgscca-abnt</u> Package

This package is the one that sets the page layout (using <code>geometry</code>, <code>titlesec</code>, <code>titletoc</code>) and adjusts the main float environments (figure, tables, captions). It can be used as a stand alone package, regardless of the underlying class. The following packages are always pre-loaded: <code>babel</code>, <code>csquotes</code>, <code>geometry</code>, <code>appendix</code>, <code>titlesec</code>, <code>titletoc</code>, <code>enumitem</code>, <code>chngctr</code>, <code>caption</code>, <code>biblatex</code>, <code>microtype</code>, <code>array</code>, <code>nicematrix</code>, <code>contour</code> and <code>soul</code>.

Take note that biblatex is loaded with the biber option, to correctly handle ABNT biography style.

# 3.1 Package Options

strict-abnt

to assure asymmetric margins, as defined by ABNT: inner ones greater than outer ones, which matters if you are going to print the doc and make a book of it, but makes it odd to look at in a computer screen, reason by which the current default setting is for symmetric margins (same text width).

chapternopagenum

to suppress the page numbers at chapters begin.

relnum

by default, figures, tables, etc. are numbered as a continuous series. With this switch, those lists are reset at each chapter, e.g. Figure 5.1 instead of Figure

repeatfields in case of authors with multiple publications, their names will be repeated for each entry. In the default setting the author's name is written only in the first entry, and replaced by underscores in the other entries.

nomicrotype in some rare cases, microtype might hurt page layout, this allows the suppression of microtype.

showframes

for layout proof only, it will draw frames around each page main parts.

showlabels

it will put a reference mark in each label created, and print out it's name.

tocdepth use:  $tocdepth = \langle number \rangle$ , whereas  $\langle number \rangle$  indicates the deepest sectioning to appears in the Table of Contents (0 being the top section, which is \chapter for report based classes, 1 being \section, and so on.) The default value being 3 (\subsubsection).

secdepth

use:  $secdepth = \langle number \rangle$ , whereas  $\langle number \rangle$  indicates the deepest sectioning to be numbered. (0 being the top section, which is \chapter for report based classes, 1 being \section, and so on.) The default value being 4 (\paragraph).

dctools

this will change page layout and base class to article, it is meant to document the class itself.

\keyword

\keyword {\keyword\}

This command can be invoked many times, it will construct a list of keywords to be used when printing out the abstract environment.

\sourcecitation \note

```
\sourcecitation {\source\}
```

\note  $\{\langle text \rangle\}$ 

When describing floating elements (like figure, tables, circuits) one always has to cite the source of it, and in some cases it might be necessary to add a special note. Those assure uniformity when doing that.

\nonum \notoc

```
\nonum\chapter {\langle chap.title \rangle}
\nonum\section {\langle sec.title \rangle}
```

 $\notesize {\langle chap.title \rangle}$ 

\notoc\section {\langle sec.title \rangle}

In some cases, it might be necessary to create a numberless chapters or sections. Those two commands can be used as a *prefix* to any sectioning command. Whilst \nonum will just suppress the sectioning number, the \notoc will also suppress it from the table of contents.

LATEX Code:

```
\nonum\chapter{some title} %this one will appear in the toc
\notoc\section{some other title} %this won't even appear in the toc
```

\tightul

\tightul {\dext\}

This will underline a short text, take note that  $\langle \text{text} \rangle$  'can't be broken' (think paragraph justification), which can lead to text overflows and bad justification. LATEX Code: LATEX Result:

Some text example \tightul{Some text example}%

\NewChapListEnv

 $\NewChapListEnv {\langle envname \rangle} {\langle displayname \rangle}$ 

This is the command used to created those *chapter like* lists, like 'List of Symbols' or 'List of acronyms'. With it, a new environment is created,  $\langle envname \rangle$ , with an associated 'numberless' chapter name  $\langle displayname \rangle$ . The newly created environment will implement a *description* like environment (thanks to *enumitem*) with an optional and a mandatory argument (see below).

LATEX Code:

```
\def\listabbrvname{Lista de Abreviaturas}
\NewChapListEnv{listofabbrv}{\listabbrvname} % this is the actual code
   used in ufrgscca-abnt.sty
```

\date \today \monthname

```
\label{eq:day} $$ \del{ay} {\langle month \rangle} {\langle year \rangle} \to \del{av} $$ \mbox{monthname} $$
```

The command \date is redefined, to allow a separation between the many arguments  $\langle \text{day} \rangle$ ,  $\langle \text{month} \rangle$  and  $\langle \text{year} \rangle$ . If not called by the user it *defaults* to current month / year. \today returns the current *locale* date, whilst \monthname returns the *locale* name of the current month.

#### 3.2 Environments

abstract

```
\boldsymbol{\beta} = \boldsymbol{\beta} ... \boldsymbol{\beta}... \boldsymbol{\beta}
```

The standard environment abstract is redefined as a numberless chapter based on the current locale (default: Portuguese), at the end of it the keywords list created with \keyword will be added.

LATEX Code:

```
\keyword{a keyword}
\keyword{another keyword}
\begin{abstract} some short summary of things\ldots
\end{abstract}
```

otherabstract

```
\begin{orange} \mathbf{otherabstract} \ [\langle lang \rangle] \ \{\langle keywords \rangle\} \dots \end{otherabstract}
```

This is the environment to create an abstract in a language other than the default one. The default value for  $\langle lang \rangle$  is english, and it can be any value that babel understands. The  $\langle keywords \rangle$  are just a list of keywords which will be added at the end of the otherabstract. Later Code:

```
\begin{otherabstract}[english]{a keyword, another keyword} some short
    summary of things\ldots
\end{otherabstract}
```

```
listofabbrv
listofsymbols
```

```
\label{listofabbrv} $$ \left[ \left\langle \text{enum-opt} \right\rangle \right] {\ABBRV}...\left\{ \text{listofabbrv} \right\} $$ \left[ \left\langle \text{enum-opt} \right\rangle \right] {\SYMB}...\left\{ \text{listofsymbols} \right\} $$ $$
```

Both environments create a description like list preceded by a numberless (\nonum) chapter.  $\langle enum-opt \rangle$  is any enumitem list valid key. Whereas  $\langle ABBRV \rangle$  /  $\langle SYMB \rangle$  are just the 'biggest' abbreviation/symbol to be used as a tab reference.

appendix annex

```
\begin{appendix}.... \end{appendix}
\begin{annex}.... \end{annex}
```

Those two environments start the appendices and annex chapters (using locale). Chapters are alphabetic *numbered* (starting at A).

## 3.3 Tabular New Columns

Thanks to array some new columns types are defined:

- P  $P \{\langle width \rangle\}$  Normal text, ragged left.
- B  $B\{\langle width \rangle\}$  Bold text, ragged left.
- $C \in C\{\langle width \rangle\}$  Normal text, centered.
- $R = R \{\langle width \rangle\}$  Normal text, ragged left.
- $L L \{\langle width \rangle\}$  Normal text, ragged right.
- $J = J\{\langle width \rangle\}$  Normal text, justified.

# 3.4 enumitem Extra Keys

Besides the *default* keys defined by the *enumitem* package a few others are defined for author's convenience:

ppc, tcc ppc and tcc are alias of each other, and just assure that lists indentation will be the same as paragraphs default.

parindent noindent

with parindent, the list number/mark is aligned with paragraph indentation.

noindent removes the label indentation.

LATEX Code: LATEX Result:

\begin{enumerate}[tcc] \item some A	1. some A
\item some A \item some B	2. sama D
\end{enumerate}	2. some B
<pre>\begin{enumerate}[tcc,parindent]</pre>	1. some A
\item some A	
\item some B	2. some B
\end{enumerate}	
<pre>\begin{enumerate}[parindent]</pre>	1.some A
\item some A	
\item some B	0 D
\end{enumerate}	2.some B
\begin{enumerate}[noindent]	1.some A
\item some A	
\item some B	0 D
\end{enumerate}	2.some B
New paragraph, for reference.	New paragraph, for reference.

tight allows for very tight lists (no indentation) to be used, for instance, inside quotes.

N.B. don't use it in normal paragraph mode, otherwise the labels will spill outside the default text window.

miditemsep

miditemsep halves items separation, as an alternative to noitemsep from enumitem

LATEX Code: LATEX Result:

```
\begin{enumerate}[tcc]
  \item some A
                                       1. some A
  \item some B
\end{enumerate}
                                       2. some B
\begin{enumerate}[tcc,miditemsep]
 \item some A
                                       1. some A
 \item some B
                                       2. some B
\end{enumerate}
\begin{enumerate}[tcc,noitemsep]
                                       1. some A
  \item some A
  \item some B
                                       2. some B
\end{enumerate}
```

arabic That's the default enumerate style. Arabic numbers, starting at 1, followed by a dot.

arabic) Label will be constructed as number followed by a parenthesis.

(arabic) Label will be enclosed by parenthesis.

arabic\* (for secondary lists) Label will be constructed by the label of the outer list, this item number and a final dot.

arabic\*) (for secondary lists) Label will be constructed by the label of the outer list, this item number and a final parenthesis.

roman This and below keys are the same as the arabic ones, but using lower case roman numbers.

roman) lower case roman number, followed by a parenthesis.

(roman) enclosed by parenthesis.

roman\* preceding one followed by roman number and a final dot.

roman\*) same, followed by a final parenthesis.

Roman This and below keys are the same as the arabic ones, but using upper case roman numbers.

Roman) upper case roman number, followed by a parenthesis.

(Roman) enclosed by parenthesis.

Roman\* preceding one followed by roman number and a final dot.

Roman\*) same, followed by a final parenthesis.

alpha This and below keys are the same as the arabic ones, but using lower case alpha numbers.

alpha) lower case alpha number, followed by a parenthesis.

(alpha) enclosed by parenthesis.

alpha\* preceding one followed by alpha number and a final dot.

alpha\*) same, followed by a final parenthesis.

Alpha This and below keys are the same as the arabic ones, but using upper case alpha numbers.

Alpha) upper case roman number, followed by a parenthesis.

(Alpha) enclosed by parenthesis.

Alpha\* preceding one followed by roman number and a final dot.

Alpha\*) same, followed by a final parenthesis.

LATEX Code: LATEX Result:

```
i. some A
\begin{enumerate}[tcc,roman]
                                        ii. some B
 \item some A
 \item some B
                                       iii. some C
 \item some C
\end{enumerate}
                                        I. some A
\begin{enumerate}[tcc,Roman]
 \item some A
                                       II. some B
 \item some B
 \begin{enumerate}[tcc,alpha*]
                                            II.a. some A
   \item some A
   \item some B
                                            II.b. some B
   \item some C
 \end{enumerate}
                                            II.c. some C
 \item some C
\end{enumerate}
                                      III. some C
\begin{enumerate}[tcc,arabic]
 \item some A
                                        1. some A
 \item some B
 \begin{enumerate}[tcc,roman*)]
                                        2. some B
   \item some A
   \item some B
                                             2.i) some A
   \item some C
 \end{enumerate}
                                            2.ii) some B
 \item some C
                                            2.iii) some C
\end{enumerate}
                                        3. some C
```

bullet for simple itemized lists, it will replace the default black dot by an 'open bullet' LATEX Code: LATEX Result:

```
\begin{itemize}[tcc,miditemsep]
 \item some A

    some A

  \item some B
                                        • some B
 \item some C
                                          some C
\end{itemize}
\begin{itemize}[tcc,bullet,
   miditemsep]
                                          some A
  \item some A
                                        • some B
  \item some B
                                        • some C
  \item some C
\end{itemize}
```

# 4 <u>ufrgscca-core</u> Package

The *ufrgscca-core* package defines a set of commands for authors, students, advisors and examiners names and related info. It is needed by most/all of the tc bundled packages.

## 4.1 Core Forms Commands

```
\tccbrief \t\tcccoadvisorbrief \t\tccadvisorsreview \t
```

```
\label{eq:condition} $$ \tccbrief {\langle brief \rangle} $$ \tccadvisorsreview {\langle brief \rangle} $$
```

Those commands are only of use when using ufrgscca-forms. \tccbrief sets the work initial summary, \tcccoadvisorbrief sets the justification for having

a co-advisor, \tccadvisorsreview sets the advisor's review.

#### 4.2 Core Global Commands

\location

 $\lceil \langle \text{city} \rangle \} \{\langle \text{state} \rangle \}$ 

To redefine the default values of (city) and (state) (Porto Alegre and RS).

\TCCcoord \TCCcoordtitle  $\TCCcoord {\langle (title) full name \rangle} [\langle gender \rangle]$ \TCCcoordtitle {\langle coordinator denomination \rangle}

\coursecoord \coursecoordtitle

\coursecoord [\langle(title) full name\rangle] [\langlegender\rangle] \coursecoordtitle {\course coordinator denomination}}

(coordinator denomination) and (course coordinator denomination) are the full 'job title' of their position. (gender) can be either 'm' or 'f'.

# 4.3 Core Specific Commands

The following commands are more or less self-explanatory, (ID) is the student's university ID. (Nproc) is the process/request number. (gender) can be either 'm' or 'f'.

\author \authorinfo \student \studentinfo

\author  $\{\langle last \rangle\} \{\langle first \rangle\} [\langle gender \rangle]$ \authorinfo [ $\langle Nproc \rangle$ ] { $\langle ID \rangle$ } { $\langle email \rangle$ }  $\mathsf{tdent} \{\langle \mathsf{last} \rangle\} \{\langle \mathsf{first} \rangle\} [\langle \mathsf{gender} \rangle]$  $\mathsf{Studentinfo} [\langle \mathsf{Nproc} \rangle] \{\langle \mathsf{ID} \rangle\} \{\langle \mathsf{email} \rangle\}$ 

\advisor \advisorinfo  $\advisor [\langle title \rangle] {\langle last \rangle} {\langle first \rangle} [\langle gender \rangle]$  $\advisorinfo {\langle Institut \rangle} {\langle title-info \rangle} {\langle email \rangle} {\langle phone \rangle}$ 

\coadvisor \coadvisorinfo  $\coadvisor [\langle title \rangle] {\langle last \rangle} {\langle first \rangle} [\langle gender \rangle]$  $\verb|\coadvisorinfo|{\langle Institut \rangle}| {\langle title-info \rangle}| {\langle email \rangle}| {\langle phone \rangle}|$ 

\examiner \examinerinfo  $\ensuremath{\verb| (title)| {\langle last \rangle} {\langle first \rangle} [\langle gender \rangle]}$  $\operatorname{constraint} \{\langle \operatorname{Institut} \rangle\} \{\langle \operatorname{title-info} \rangle\} \{\langle \operatorname{email} \rangle\} \{\langle \operatorname{phone} \rangle\}$ 

\altexaminer \altexaminerinfo  $\altexaminer [\langle title \rangle] {\langle last \rangle} {\langle first \rangle} [\langle gender \rangle]$  $\arrangle$   $\arr$ 

# 5 ufrgscca-cover Package

This package is the one that sets the front pages, depending on the kind of 'report' being generated. The default being to generate 3 cover pages: an identification on, followed by presentation one, then an referral/approval one.

# 5.1 Package Options

in case the doc is just a class assignment with, possibly, many co-authors. It changes mainly the front matter, which is simplified (no referral page, for instance).

internship in case the report is a internship one.

# 5.2 Defined Commands

#### \maketitle

#### \maketitle

This is the only main command, which will typeset the front matter. It requires that all *specific info* be already set up (like work title, author's name, affiliation, etc.)

```
\course {\arg\}
                  \course
        \courseacronym
                               \courseacronym \{\langle arg \rangle\}
     \graduationtitle
                               \graduationtitle \{\langle arg \rangle\}
             \university
                               \university \{\langle arg \rangle\}
  \universityacronym
                               \operatorname{\operatorname{Vuniversityacronym}} \{\langle \operatorname{arg} \rangle\}
 \universitydivision
                               \universitydivision \{\langle arg \rangle\}
\divisiongradcouncil
                               \divisiongrad council {\langle arg \rangle}
             \department
                               \department \{\langle arg \rangle\}
              \classcode
               \classname
                               \subject
                               \classname \{\langle arg \rangle\}
                               \subject {\arg\}
```

In case some customization is needed, one can change them as needed. The default values are set for the *control and automation* course at UFRGS/EE.

# 6 <u>ufrgscca-forms</u> Package

This package defines just two user commands to generate specific forms needed at UFRGS/EE.

#### 6.1 Forms Defined Commands

\tcforms \tcemptyforms

```
\tcforms {\langle formslist \rangle} \\ tcemptyforms {\langle formslist \rangle}
```

\tcforms will generate the many forms (\( \formslist \)) using the information from \( local.tex, \text{ whilst \tcemptyforms will generate said forms with 'blanks' (to be fulfilled by hand, for instance).

(formslist) is a csv list of any of:

reqform Registration requirement form. coadvisor Coadvisor justification form.

boardsapproval Boards approval form.

boards approvar form.

advisors approval form.

receipts Receipts forms (one per board member).
examinersforms Grades and correction forms (per board member).

rectifyapprovalform Corrections approval form.

# 7 <u>ufrgscca-lists</u> Package

The following packages are always pre-loaded: newfloat, listings and xcolor. It defines a new floating environment. Combined with listings one can typeset exempts of code listing.

#### 7.1 Environment

st \begin{codelist}...\end{codelist}

codelist

\caption will be named 'Listing' (Listagem). LATEX Code:

```
\begin{codelist}[htbp]
  \caption{sample C code}
  \label{code01}
  \begin{lstlisting}[language=C]
    struct i2c_msg
    {
        __u16 addr;    /* endereco do escravo */
        __u16 flags;
    }
  \end{lstlisting}
  {\sourcecitation{\textcite{Garg:SMA-2000}}}
\end{codelist}
```

#### 7.2 Declared Commands

listofcodelist

#### \listofcodelist

This will create the 'List of ...' associated with the previous environment.

\DeclareNewFloat

A new float environment, named <code>env-name</code>, will be created. Captions will be associated (numbered) as <code>listname</code> <code>> num:</code>. Finally, an associated command <code>listof...</code> will be defined, using <code>listofname</code> as a numberless <code><chapter title</code>. Larent Code:

```
\def\listingname{Listing}%
\def\listlistingname{List of Listings}%
\DeclareNewFloat{codelist}{lox}{\listingname}{\listlistingname}%%
%% after that, one can do as in the previous example
%%
%% the list of, will be created as
\listofcodelist
```

# 8 <u>ufrgscca-gen</u> Package (extended documentation)

Just two set of commands are defined, one is kind of a 'command factory' aimed at creating macros in a standard way, while the other helps create 'case like' commands.

# 8.1 Package Options

family sets the family name, defaults to tcdef.
group sets the group name, defaults to gen.

#### 8.2 Defined Commands

\fam@grp@cmd.

```
\cmdfactory
\factory
\tcgen@cdef
```

\cmdfactory is the actual command meant to be used (the other two are just auxiliary ones).  $\langle \text{cmd-lst} \rangle$  is a csv list of commands.  $\langle \text{fam} \rangle$  is the command family (defaults to tcdef) and  $\langle \text{grp} \rangle$  is the family group (defaults to gen). The newly created commands will be based on \tcgen@cdef (the actual assigment command) having the form \cmd {\( \text{new-val} \) \}, accepting a single mandatory value. Internally  $\langle \text{new-val} \rangle$  will be stored in a macro likely named

\factory is basically the same as \cmdfactory, whilst to create just one new command (it is the command called by \cmdfactory via \forcsvlist.)

\mkswitch \addcase

mkswitch will create a command, \sw-name {\case\}, which will behave like a switch/case in other programming languages. \default\) is the code to be executed in case a *switching value* isn't defined. \addcase adds *cases*, one by one, to the switch.  $\langle \text{str-case} \rangle$  can be any \csname valid name.  $\langle \text{code} \rangle$  is the code to be executed.

LATEX Code:

```
\mkswitch[\gr@depcut]\gr@case@angle
\addcase\gr@case@angle{}{\def\gr@ANG{0}}
\addcase\gr@case@angle{A}{\def\gr@ANG{\gr@A}}

%%
%% actual use of the switch
\gr@case@angle{A} % this will result in \def\gr@ANG{\gr@A}
```

# 9 ufrgscca-coord Package (extended documentation)

This package defines a set of auxiliary commands meant to support the Professor coordinating students work. it will always pre-load the *longtable* and *ufrgscca-forms* packages. One can select the reports/forms to be generated using the package options or the command \setreports {\keys}}

N.B. It might be also useful to use the commands defined at subsection 6.1, Forms Defined Commands .

# 9.1 Package/Report Options

```
calendar Calendar for the period.

checklist a students check list.

report a student control report.

reportxinfo report additional info.

boards exam board dates.

boarddates exam board dates with highlighted dates.

studentlist a simple student list.

revforms per student reviews forms.

referral per student referral letters.

cocertificate per student coadvisor certificate letter (if any).
```

# 9.2 Defined Commands

The report document to be created is composed of 2 main parts:

- 1. A global preamble, where one sets
  - 1.a. the current semester, Course/TCC coordinator names, etc.,
  - 1.b. auxiliary data, like students check list items and
  - 1.c. students data.
- 2. A 'final part' whereas one set which reports are to be generated.

#### 9.2.1 Global Commands I

One can (should) use the commands listed at subsection 4.2, Core Global Commands, and these below:

\tcccalendareventdate \boardstitleB \boardsOBS \TCCperiod

```
\tcccalendareventdate {\langle date \rangle}
\boardstitleB {\ditleB\}
\boardsOBS {\langle obs\}
\TCCperiod {\semester\}
```

Use \tcccalendareventdate to set the date of a given 'event' (the list of 'calendar events' are (might have been) set in the ufrascca-ptBR-coord.def or ufrqscca-en-coord.def file). boardstitleB sets a 2nd title line for the 'boards schedule report'. \boardsOBS allows to add an observation (\landsobs) for the 'boards schedule report', finally, \TCCperiod  $\{\langle s \rangle\}$  ets the current semester value.

\tcceventAweek \tcceventBweek

```
\tcceventAweek {\week num.\}
\tcceventBweek {\week num.\}
```

\tcceventJweek {\week num.\}

\tcceventJweek

Those macros allow to change the default week value for the calendar's events.

```
\overline{\colored{} \colored{} \colore
```

Whereas one has a '4x5 alphabetic matrix', lines A to D, columns A to E. (checkLC) being one element of that matrix (from checkAA up to checkDE), (chek-item) is a free identifier (to be used with the \checklist), and (check-text) the text to appear in the 'check list report'. So, for instance: LATEX Code:

```
\checkdef{checkAA}{tcc-part}{Rel. Parcial}
                                               % this creates the '
   check item' tcc-part and associates it with the AA position (first
   line, first column), display text 'Rel. Parcial'
\checkdef{checkBA}{partOK}{Aprov. Rel. Parcial}
                                               % this creates 'partOK'
    and associates it with BA position
\checkdef{checkAB}{board}{Banca def.}
                                               %
                                               % 'board-date' is
\checkdef{checkBB}{board-date}{Data defesa}
   associated with the BB position
\checkdef{checkAE}{tcc-final}{TCC final}
                                               %
\checkdef{checkDE}{exam}{Em Exame}
                                               % 'exam' (display 'Em
   Exame') is associated with the DE position
%%
%%
%% later on, one can use (inside a \NewStudent command)
\checklist{tcc-part,partOK,exam}
                                               % this will, for a
   given student, 'mark' the 'tcc-part', 'partOK' and 'exam' items.
```

Be aware that, \checkdef can and should be only used at the preamble, whereas \checklist can only be used at the 'student data definition' context (meaning, inside the \NewStudent command).

## 9.2.2 Global Commands II

\NewStudent

```
\NewStudent {\langle studentname \rangle} {\langle code \rangle}
```

This is the main command describing each (student) associated work, advisor and exam board. In (code) one should use the commands defined in subsection 4.3, Core Specific Commands, and subsubsection 9.2.3, Student Specific Commands (although one can use any valid  $\LaTeX$  2 $\varepsilon$  preamble code, keep in mind those will be executed BEFORE \begin{document}), to describe a student work. So, for instance:

LATEX Code:

```
\NewStudent{Artur}{
                     \student{last}{first}[m]
                     \studentinfo[]{243716}{email@somewhere}
                  \TCCtitle{work title}
                  \advisor{de Amorin}{Heraldo José}[m]
                  \coadvisor{Camargo Nardelli}{Vitor}[m]
                   \ensuremath{\mbox{examinergrades}} \{9.2\} \{8.5\} \{9.2\}
                   \examiner{Götz}{Marcelo}[m]
                   \ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath}\amb}\amb}\amb}}}}}}}}}}}}}}
                   \examiner{Comparsi Laranja}{Rafael Antônio}
                   \ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath{\ensuremath}\amb}\amb}\amb}}}}}}}}}}}}}}
                   \altexaminer{Ventura Bayan Henriques}{Renato}
                %%
                  %%
                   \timeslot[Teams]{12/11}{15:30}
                   \studentFate[Dismiss] %% FF or Dismiss ??
```

N.B. Internally, \NewStudent will create a command named \studentname, with a *hook* named \studentname.hook (the dot is part of the hook's name).

# 9.2.3 Student Specific Commands

#### \studentFate

# \studentFate [ $\langle fate \rangle$ ]

This assigns the <code>\( fate \)</code> of a student, for those cases that one cannot rely on the 'calculated one' (from examiners individual grades). <code>\( fate \)</code> can be either C or D (in case a student got in exam), FF for those that haven't finished the work or 'Dismiss' for those that, for whatever reason, got dismissed. The default is 'do nothing' (no <code>\( fate \)</code>) assigned)

#### \studenttimeslot \timeslot

```
\label{local} $$ \operatorname{Ideal} {\langle ate \rangle} {\langle time \rangle} \to \operatorname{Ideal} {\langle ate \rangle} {\langle time \rangle} $$ $$ $$ \operatorname{Ideal} {\langle ate \rangle} {\langle time \rangle} $$
```

\timeslot is just an alias of \studenttimeslot. They set, for the Boards Report, the \(\lambda\text{local}\rangle\), \(\lambda\text{date}\rangle\) and \(\lambda\text{time}\rangle\) in which a student will have its work presented. Those commands are meant to be used 'inside' a \NewStudent command.

\studentTCCtitle \TCCtitle \studentremark

```
\mathsf{title} \{ \langle \mathsf{title} \rangle \}
```

\TCCtitle  $\{\langle title \rangle\}$  \studentremark  $\{\langle remark \rangle\}$ 

\TCCtitle is also just an alias to \studentTCCtitle which just 'defines' the current student "work's title". \studentremark just inserts a  $\langle remark \rangle$ , which will appear in the *report*'s report (... report option).

# \DistinctBoard \DefaultBoard

## \DistinctBoard

## \DefaultBoard

Normally, the default, it's assumed that the student's advisor will also be a member of the student's exam board. For the ones in which this doesn't holds true, one should use the \DistinctBoard after informing a student's name (via

\student) and before informing its advisor name (via \advisor). For instance: LATEX Code:

```
\NewStudent{Artur}{
  \student{last}{first}[m]

\studentinfo[]{243716}{email@somewhere}
\TCCtitle{work title}
\DistinctBoard
\advisor{de Amorin}{Heraldo José}[m]
\examiner{Götz}{Marcelo}[m] % He will be the 1st
  examiner
\examiner{Comparsi Laranja}{Rafael Antônio} % the 2nd
\examiner{Ventura Bayan Henriques}{Renato} % the 3rd
}
```

## \examinergrades

## \examinersgrades $\{\langle N1 \rangle\} \{\langle N2 \rangle\} \{\langle N3 \rangle\}$

Quite obvious, this set the grades given by an examiner (the one defined by the 'last' \examiner before this.).

#### \checklist

# \checklist {\csv-checkitems\}

(csv-checkitems) is a csv list of valid 'items' (the ones defined by \checkdef) and it will 'mark' (check) the corresponding items for a given student.

#### \addtostudent

### $\addtostudent {\langle student \rangle} {\langle code \rangle}$

 $\langle \mathtt{code} \rangle$  will be appended to the command created with  $\mathtt{NewStudent}$ .  $\langle \mathtt{student} \rangle$  must be an already defined one, whilst  $\langle \mathtt{code} \rangle$  can be anything valid in the context of a  $\mathtt{NewStudent}$  as described in subsubsection 9.2.2, Global Commands II

### \setreports

# \setreports $\{\langle rep-list \rangle\}$

 $\langle \mathtt{rep-list} \rangle$  is a csv list of keys as defined at subsection 9.1, Package/Report Options .

#### \setstudentlist

# $\verb|\setstudentlist| \{\langle \texttt{listID} \rangle\} \{\langle \texttt{list} \rangle\}$

This command will define/create a list named  $\langle \texttt{listID} \rangle$  composed of a csv  $\langle \texttt{list} \rangle$  of student names (as defined by  $\backslash \texttt{Newstudent}$ ).

# \tcreports

```
\verb|\tcreports| [\langle \texttt{rep-list} \rangle] \{\langle \texttt{listID} \rangle\}|
```

This is the main command, to be used only once, at the end of the file. It will typeset the reports, as set by \setreports, using the student list identified by \(\lambda\text{listID}\). \(\rmoreports\) is a csv list of keys as defined at subsection 9.1, Package/Report Options.

# 10 <u>ufrgscca-ppc</u> Package (beta) (extended documentation)

This contains a set of auxiliary commands to keep track of many *indicators* whilst writing a *PPC document* (which is going to be evaluated based on said *indicators*, though the track of those *indicators* themselves shall not appear in the final version of it). Keep in mind, when considering the use of it: "it works as is" but it hasn't being properly debugged, and it might change "as needed locally".

The packages longtable, pdfcomment, mdframed and ufrgscca-curr will always be pre-loaded.

## 10.1 Package Options

showind (for drafts) it will display the report indicators, of those indicators whose family

wasn't set to hide.

indlong nocomments

(for drafts) when displaying an indicator, the long version of them will be used. (for drafts) comments (created with the command  $\{\langle \rangle\}$  will be suppressed.

## 10.2 Defined Commands

#### \maketitle

\maketitle

\maketitle is redefined for the specifics of a PPC document.

The next few commands use a finite set of (status) which are a pre-defined list of:

"To Be Done" tbd "Done" done

review

"to be reviewed" attention Needs Attention

NSA (portuguese for "do not apply") NSA

no references noref

EAD EAD (portuguese for "distance learning")

MDi course ware (portuguese for "didactic material")

DOCs other DOCs everything else default

### \declareindicator \indicatorDesc \indicatorText

```
\declareindicator*+ [\langle status \rangle] {\langle fam \rangle} {\langle ID \rangle} {\langle text \rangle}
\indicatorDesc {\langle longdesc \rangle} {\langle extra \rangle}
```

\indicatorText  $\{\langle text \rangle\}$ 

\declareindicator is the command to create/define a given "indicator". \( \( \frac{1}{2} \) set's its family group,  $\langle ID \rangle$  is the particular ID/term used to reference it (in a family of indicators), (text) is a short text describing it (it is the text displayed when using the \indref below.). \indicatorDesc adds a \language (long description) and (extra) (extra long description) to a defined \declareindicator (it will add those text fields to the "last declared one"). (longdesc) will also be displayed when using the \indref commands, but only if the indlong option was used. The (extra) will only be used/displayed with the \PrintIndicators command. Finally, indicatorText adds a remark (text), which will be also printed out when using \lstind (akin of an explanation/remark field.)

\indsetstatus \indsetview \indsethide

```
\indsetstatus [\langle status \rangle] {\langle fam \rangle} {\langle ID \rangle}
```

\indsetview  $\{\langle fam \rangle\}$ 

\indsethide  $\{\langle fam \rangle\}$ 

indsetstatus sets the (status) of a given indicator defined by (fam) and (ID). \indsetview and indsethide  $\{\langle s \rangle\}$  et the visibility (or not) of a given "family" of indicators, meaning, if those indicators are going to be visible or not (command \indref, for instance) if the option showind is in use.

\lstind

```
\lstind [\langle seclvl1 \rangle] [\langle seclvl2 \rangle] {\langle fam \rangle}
```

\lambdastind will produce a sectioning like list, \( \sec\rull \) defaults to \( \sec\rull \) and (seclv12) defaults to \subsection, those indicators marked with an \* (when creating them) will be issued with (seclv11), those marked with an + will be issued with (seclv12). The indicator's short text will be the sectioning title, whilst the indicator's 'text' (the one assigned with indicatorText will be the sectioning body.)

\PrintIndicators

\PrintIndicators [\( fam \)]

\PrintIndicators will produce a "list of contents" like list (with cross reference to all used \indref pages). It will either issue a list of all \declareindicator or just the ones belonging to \( \frac{fam}{} \). \( \frac{fam}{} \) can be a csv list of families. Each entry will be composed by indicator's "family", "ID", "short text", "long text" and "extra description" but not the text issued with \indicatorText.

# \helpindicators

#### \helpindicators

This will just prints, middle text, a quick "help text" listing the few main "indicators related command" (to help out those less  $\LaTeX$  savvy writers.)

#### \ifshowind

Just a helping command, based on the package options. If the option showind was used, (code-ifshow) is executed, otherwise (code-ifnot).

\textmark \comment

```
\t textmark [\langle status \rangle] {\langle text \rangle} \\ \t [\langle status \rangle] {\langle title \rangle} {\langle text \rangle}
```

Those are annotation, remark commands. The difference being that \textmark will just highlight the \(\text\) (using \(\status\) "format"), whilst comment will create a "remark box" (the same used when inserting an indicator's reference, commands below). N.B. \(\cdot\)comment is suppressed unless the option showind is used.

\indref \indreflst

```
\label{local_local_local_local_local_local} $$ \left( \frac{\langle \text{fam} \rangle}{\langle \text{ID} \rangle} {\langle \text{comment} \rangle} \right) $$ \left( \frac{\langle \text{status} \rangle}{\langle \text{fam} \rangle} {\langle \text{IDlist} \rangle} {\langle \text{comment} \rangle} $$
```

\indref creates a box ( TikZ based mdframed ) of the indicator denoted by \( \)fam \\ and \( \)ID\( \). The family and IDs will be issued as the "frame title", the current indicator's \( \)status\( \) will be printed out (the whole box will be highlighted accordly), the short version of the indicator will be used (the long version will "appear" as a pdfcomment), finally any \( \)comment\( \) will be added to the text box. Each \( \)indref box will have a link to the indicator's list (issued with \( \)PrintIndicators\( \)). If the optional argument \( \)status\( \) is used, the indicator's status will be updated accordly. The star version also prints the indicator's long text.

\indreflst behaves similarly, with the difference that  $\langle \mathtt{IDlist} \rangle$  is a csv list of IDs (same family), moreover, each item of said list can have the form either just  $\langle \mathtt{ID} \rangle$  or  $\langle \mathtt{status:ID} \rangle$ , in the last form, that ID will have its status updated, as well.

\fancyquote

```
\fancyquote [\langle vspc \rangle] {\langle text\rangle} {\langle author\rangle} {\langle dateref\rangle}
```

As quick "quote" hack, \fancyquote will typesets a \langle text \rangle (small size, italic text, in a minipage environment) followed by \langle author \rangle and \langle dateref \rangle. This is meant to be used after a \chapter or \section commands. \langle vspc \rangle is to be used in case one has to adjust the vertical space between the sectioning command, and the quote one.

\labelhack

As the name implies, it is a hack. In some cases (which we haven't manage to found why/what), hyperref would fail miserably when using the \nameref (in some cases getting the sectioning correct, but not the name!). This just assures that \nameref will use the correct sectioning name in those cases. For Example:

\section{this section}\labelhack{this section}\label{somelabel}

\acrodef
\acrol
\acrols
\acrosl
\acrofoot

 $\acrodef {\langle acroID \rangle} acronymlong$ 

```
\label{eq:control_loss} $$ \acrol {\langle acroID \rangle } \acrols {\langle acroID \rangle } \acrosl {\langle acroID \rangle } \acrofoot {\langle acroID \rangle } \printacrolist [\langle enumkeys \rangle] {\langle widest \rangle } $$
```

Those are yet another acronym hack. \acrodef "creates" an acronym, identified by \( \acroID \), whose short (acronym) version is \( \acronym \) and the long version in \( \lambda \text{long} \). \acro just typesets the \( \acronym \), \acrol the \( \lambda \text{long} \) version. \acrols typesets the the long version followed by the short (using a comma as separator). \( \acrosl \) prints the short version first. Finally, \acrofoot typesets the short version in text and the long as a footnote. \( \printacrolist \) creates a description list based on the \( \listofabbry \) environment.

#### 10.3 Environments

ppc.quote

```
\begin{ppc.quote} ...\end{ppc.quote}
```

This is just a tailored "quote" environment, using almost all page width, just in a smaller font size.

# 11 <u>ufrgscca-curr</u> Package (beta) (extended documentation)

This package is mostly in beta state, some parts of it should be identified as alpha state. Those are mostly rushed out adaptations of other "solutions at hand". Literally, try to use it at your own peril.

The background of it: To have the ability to "describe" (store the information in a "structured way") an University Course curricula and later on have the possibility to presented that same information in many different ways (including a dependence graph). To an extended, most of it is done (and working), but hopeless lacking more testing and debugging.

Why is it included in the bundle? Well, it is needed, in part for completeness, by ufrgscca-ppc which is "locally important".

### 11.1 Commands Creating the many lists

The following commands "describe" a curricula, whereas one is a sequence of semesters  $\langle \mathtt{semID} \rangle$ , each semester is composed by a list of classes,  $\langle \mathtt{classID} \rangle$ , and each class has a list of dependencies,  $\langle \mathtt{classID} \rangle$  as  $\backslash \mathtt{depdef}$ . All those lists are stored as csv lists, so "processing them" can be systematized.

\topicdef \defaulttopic

```
\label{topicdef} $$ \color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\color{\
```

\topicdef defines \langle topicID \rangle (to be used when describing a class) and associates a \langle text \rangle description and a \langle color \rangle (for topic highlight). \defaulttopic sets the default one (if not explicitly given when describing a class).

\semdef

This "defines" a semester,  $\langle semID \rangle$ , and associates with it a  $\langle cod \rangle$  (for reference) and a  $\langle pos \rangle$  (to be used by, for instance, ufrgscca-curr-graph.)

```
\classdef
\setclass
\classremark
```

```
\classdef [\langle topicID \rangle] <\langle pos \rangle > {\langle classID \rangle} {\langle cred \rangle} {\langle typ \rangle} {\langle name \rangle} {\langle desc \rangle} \\ \classID \rangle \\ \classremark {\langle remark \rangle}
```

\classdef defines a class, associating with a  $\langle \text{topicID} \rangle$ ,  $\langle \text{pos} \rangle$  (for ufrgscca-curr-graph),  $\langle \text{classID} \rangle$ , number and type,  $\langle \text{typ} \rangle$ , of credits,  $\langle \text{cred} \rangle$ , a long name,  $\langle \text{name} \rangle$  and description,  $\langle \text{desc} \rangle$ . \classremark adds an extra remark to it.

The following commands always refer to the "last defined" \classdef unless \setclass is used, which changes the "current class" for the following commands.

\depdef \altdef  $\label{local_depdef} $$ \depdef [\langle topicID \rangle] < \langle pos \rangle > {\langle classID \rangle}$$$ 

\altdef

\depdef inserts/creates a "class dependency" list. The highlight color (if used) is usually defined by the current class topic (informing \timestopicID\) changes the highlight color). \(\times\) is used by \(ufrgscca-curr-graph\) to determine the incident line angle.

\altdef defines/start and alternate dependency list.

\bibdef

\bibdef [\langle type \rangle] {\langle text \rangle}

This is used to set a list of bibliographies, one per issued command. The default  $\langle type \rangle$  value is just bib, possible values (as understood by ufrgscca-curr-tab) are bib, basic and comp.

# 11.2 List Processing Commands

\LstClass \LstDep \LstTopic Those are the main loop commands that go through the lists.

 $\LstClass[\langle cmd \rangle] \{\langle semID \rangle\}$ 

\LstDep  $[\langle cmd \rangle] < \langle ang \rangle > {\langle classID \rangle}$ 

\LstTopic  $[\langle cmd \rangle] \{\langle topicID \rangle\}$ 

(cmd) can be any command accepting a single argument. It will, in fact, be the one defining the way the data will be, effectively, be presented.

\LstClass will process \( \)cmd\\ over all classes associated with \( \)semID\\.

\LstDep will process \( \)cmd\\ over all dependency classes associated with \( \)classID\\.\
\LstTopic will process \( \)cmd\\ over all classes associated with \( \)topicID\\.

12 ufrgscca-curr-tab Package (alpha) (extended documentation)

This is truly a work in progress (based on some old ideas), not really tested. It shall be revised and, mostly sure, it will be changed (no compatibility guaranties). It always pre-load ufrgscca-curr and longtable.

#### 12.1 Tabular Presentation Commands

\TabEtp \TabTopic  $\verb|\TabEtp<|\type|> [\langle \texttt{sectioning}\rangle] c \{\langle \texttt{semID}\rangle\}|$ 

 $\verb|\TabTopic|| \{ \texttt{\langle type \rangle} \} \{ \texttt{\langle topicID \rangle} \}$ 

**\TabEtp** will construct a longtable with all classes associated with \( \semID \) (including it's dependencies and bibliography).

\TabTopic will construct a longtable with all classes associated with \topicID\.

# 13 <u>ufrgscca-curr-graph</u> Package (alpha) (extended documentation)

# 13.1 Graph Presentation Command

Ironically, this is the "oldest" of the *-curr-* packages, but it is the less tested one, and the one whose code is more prone to fail in unexpected ways, be

advised: do not try to use it, unless you know the internal code well. It always pre-load ufrgscca-curr (N.B. it also depends on tikz).

\GraphSem

It will create a dependency graph for a given  $\langle \mathtt{semId} \rangle$ . N.B. to start with, it is highly dependent on the semester sequence, one shall start with first semester and go from there.