CoppeTeX quick reference

Class `ufrj`, v5.0 — every option, command and environment

This is the short companion to `ufrj.pdf`, the full manual, which is written in Portuguese. A UFRJ thesis may be written in Portuguese, English or Spanish (CEPG Resolution 302/2024, art. 57); this sheet is for whoever writes it in English. A work starts with the class and the style of its academic unit — `\documentclass[dsc]{ufrj}` and `\usepackage{ufrj-coppe}`, say.

Everything on this sheet is the CLASS, which names no unit: it is the Manual UFRJ/SiBI, and it is the same wherever the work is written. What belongs to a unit — its name, its Programas or Courses, its logo, its own options — is on the unit's own sheet: `coppe-quickref.pdf` for COPPE, `poli-quickref.pdf` for the Escola Politécnica.

The **Where** column says where a command may appear: PRE means the preamble, before `\begin{document}`; DOC means after `\begin{document}`, and, for everything that feeds the cover, *before* `\maketitle`.

Three things that surprise people. The document data goes *inside* `document`, not in the preamble. The bibliography is `biblatex` with `biber`, not BibTEX. And `\frontmatter`/`\mainmatter` are what switch folio numbering on, so leaving them out gives the wrong page numbers.

Command	Example	Where	What it does
CLASS OPTIONS — work type, one is required			
`msc`	`\documentclass[msc]{ufrj}`	PRE	M.Sc. dissertation.
`dsc`	`\documentclass[dsc]{ufrj}`	PRE	D.Sc. thesis.
`mscexam`	`\documentclass[mscexam]{ufrj}`	PRE	M.Sc. qualifying exam. No CAPES sheet, no catalogue card, no reference above the abstract.
`dscexam`	`\documentclass[dscexam]{ufrj}`	PRE	D.Sc. qualifying exam. Same.
`mscsem`	`\documentclass[mscsem]{ufrj}`	PRE	M.Sc. seminar, a requirement of some Programas and *not* a qualifying exam. Same three omissions: it is not deposited.
`grad`	`\documentclass[grad]{ufrj}`	PRE	Undergraduate work (TCC; "Projeto de Graduação" with `ufrj-poli`), presented to a Course: the title conferred is the course's, and the additional sheet carries only the catalog card, without the CAPES fields.
CLASS OPTIONS — writing language			
`brazilian`	`[brazilian,dsc]`	PRE	Portuguese. The default; needs no writing.
`english`	`[english,dsc]`	PRE	English. The foreign abstract switches to Portuguese.
`spanish`	`[spanish,dsc]`	PRE	Spanish. Needs `ufrj-lang-spanish.def` and `spanish-ufrj.lbx`. Three abstracts.
`french`	`[french,dsc]`	PRE	French. **Not** a permitted thesis language; ships as a demonstration.
`italian`	`[italian,dsc]`	PRE	Italian. Same.
CLASS OPTIONS — the rest			

Command	Example	Where	What it does
numbers	[dsc,numbers]	PRE	Numeric citations (1) instead of author-date (4.1.1.1.1: parentheses or superscript, \supercite); list in citation order. Not with footnotes: the class warns.
sempdfa	[dsc,sempdfa]	PRE	TURNS OFF the PDF/A-2b output, which is ON by default since v5.0: 2.2(d) requires the deposited file to be PDF/A (ISO 19005), self-contained — embedded fonts, sRGB colour, XMP metadata, nothing external. Use it for a draft run, or for a package PDF/A rejects; the deposited file has to be PDF/A. The v4.1 option pdfa is still accepted and does nothing. Check with veraPDF.
comserifa	[dsc,comserifa]	PRE	Serif family. Sans is the default since v4.1.
semserifa	--	PRE	Accepted, does nothing. What it asked for became the default.
semlinks	[dsc,semlinks]	PRE	Accepted; confirms the default (links with no colour and no frame, still clickable). Wins over the two below.
linkscommoldura	[dsc,linkscommoldura]	PRE	Framed links, on screen only (the frame is not printed).
setavermelha	[dsc,setavermelha]	PRE	Red curved arrow at the start of a wrapped listing line. Black by default.
linkscoloridos	[dsc,linkscoloridos]	PRE	Coloured link text. Against 2.1(b) of the UFRJ manual (black text): for on-screen reading copies, not for deposit.
doublespacing	[dsc,doublespacing]	PRE	Double spacing instead of one-and-a-half (2.2c).
twoside	[dsc,twoside]	PRE	Mirrored margins, for printing and binding.
oneside	[dsc,oneside]	PRE	One-sided, 3 cm left margin on every sheet. The default.
semorientadornabanca	[dsc,semorientadornabanca]	PRE	Approval sheet with the examiners only. By default the advisors head the board, as 3.1.2.1.3(e) requires.
orientadorexamina	[dsc,orientadorexamina]	PRE	Puts the advisors and coadvisors at the head of the board on the approval sheet. Off by default: the board is what examiner declares, in order, and the advisor, who chairs it, is the first examiner (3.1.2.1.3e).
coorientador	[dsc,coorientador]	PRE	List coadvisors on the abstract pages too.
rascunhoficha	[dsc,rascunhoficha]	PRE	Draft catalogue card while writing. **Never valid for deposit.**
resumosemreferencia	[dsc,resumosemreferencia]	PRE	Drop the work's own reference from the top of the three abstracts. It is printed by default (3.1.2.1.4, Annexes E and F).

Command	Example	Where	What it does
numeracaoporcapitulo	[dsc,numeracaoporcapitulo]	PRE	Number figures, tables, quadros, programs, algorithms and equations within the chapter (Figure 4.1, equation (4.1)). By default they run through the whole work (Figure 1, 2, 3; (1), (2)), as the UFRJ manual (2.10, 2.11) and NBR 14724 (5.7, 5.8) show.
linhanafolhaderosto	[dsc,linhanafolhaderosto]	PRE	Print the research line (linhapesquisa) on the title page, above the advisors, as in the SiBI model. Off by default.
dadoscoleta	[dsc,dadoscoleta]	PRE	Print the Informacoes Coleta CAPES block on the folha adicional (tipo de producao, projeto vinculado, nome do projeto, area de concentracao, agencias). Off by default: the sheet is filled by the Programa, so the folha adicional shows only the ficha catalografica.
listasnosumario	[dsc,listasnosumario]	PRE	Put the pre-textual lists in the table of contents. Against NBR 6027 and the UFRJ manual (3.1.2.1.6): use only if your Programa requires it.
simbolosalfabeticos	[dsc,simbolosalfabeticos]	PRE	List of symbols in alphabetical order instead of order of appearance.
assinaturas	--	PRE	Accepted, does nothing. Signature rules are gone: deposit is digital.
numeraisromanos	[dsc,numeraisromanos]	PRE	Roman numerals on pre-textual sheets. **Against 2.7**; legacy only.
morewrites	[dsc,morewrites]	PRE	A missing `morewrites` package becomes an error, not a warning.
semmakeindex	[dsc,semmakeindex]	PRE	Do not run makeindex from the class. By default the class runs it at the end of each compilation (restricted shell escape is enough), so the lists and the index appear in any editor.
semmorewrites	[dsc,semmorewrites]	PRE	Do not load `morewrites`. Saves about half a second per pdflatex pass (Overleaf free plan). Safe only without an index, several indexes, a glossary or nomenclature: the class stops with a clear error if the 16 streams run out.
PREAMBLE			
\addbibresource	\addbibresource{thesis.bib}	PRE	Declare the bibliography database. With the `.bib` extension.
\makelosymbols	\makelosymbols	PRE	Turn on collection of the list of symbols. Without it, `\symbl` records nothing.
\makeloabbreviations	\makeloabbreviations	PRE	Same for the list of abbreviations.
\makelosiglas	\makelosiglas	PRE	Separate list of acronyms (recommended by 3.1.2.2.6). Without it, acronyms go to the list of abbreviations.

Command	Example	Where	What it does
\newufrjfloat	\newufrjfloat{map}{Map}{List of Maps}	PRE	Declare your own float: caption on top, \source below, own list.
\newsigla	\newsigla{ufrj}{UFRJ}{Universidade Federal...}	PRE	Declare an acronym for \sigla.
\useufrjlanguage	\useufrjlanguage{french}	PRE	Load one more language pack, for quotations in a third language.
\graphicspath	\graphicspath{{figures/}}	PRE	Where your figures live. Standard LaTeX.
\freeconfig	\freeconfig{Dr.}{...}{...}{...}{...}{...}	PRE	Override the work type entirely. Escape hatch; do not use for a normal thesis.
IDENTIFICATION — after \begin{document}, before \maketitle			
\title	\title{Título da tese}	DOC	The Portuguese title.
\foreigntitle	\foreigntitle{Thesis title}	DOC	The English title.
\titlein	\titlein{spanish}{Título}	DOC	The title in any other language.
\subtitle	\subtitle{Um subtítulo}	DOC	Optional subtitle, Portuguese. Printed after a colon, in ordinary case.
\foreignsubtitle	\foreignsubtitle{A subtitle}	DOC	The same, English.
\subtitlein	\subtitlein{spanish}{...}	DOC	The same, any language.
\author	\author{All given names}{Surname}	DOC	Two arguments: the catalogue card has to invert the name.
\advisor	\advisor{Ana}{Lima}{D.Sc.}{UFRJ}	DOC	Name, surname, degree, institution. Repeat per advisor. Optional first argument is the treatment.
\coadvisor	\coadvisor{Bia}{Sousa}{Ph.D.}{UFF}	DOC	Same four arguments.
\examiner	\examiner{Carlos Dias}{D.Sc.}{USP}	DOC	Name and surname in one argument, then degree and institution.
\department	\department{SIGLA}	DOC	The acronym of the Programa (or, with grad, of the Course), as the unit style declares it. The acronyms are on the unit's sheet; one the unit did not declare is a class error.
\date	\date{09}{2026}	DOC	Month and year of deposit, as numbers. Not the defence date.
\city	\city{Macaé}	DOC	The city of the work, which heads the cover and the reference above each abstract. UFRJ has campuses in Macaé and in Duque de Caxias; the unit style declares its own default, and what the author writes wins.
\state	\state{RJ}	DOC	Its state.
\country	\country{Brasil}	DOC	Its country, printed only when the language pack asks for it.
\place	\place{Macaé}{RJ}{Brasil}	DOC	The three at once.
\university	\university{Universidade Federal do Rio de Janeiro}	DOC	The university's name, for the rare work that is not UFRJ's.
\dataaprovacao	\dataaprovacao{15 de setembro de 2026}	DOC	Defence date, in words. Without it the sheet reads "a ser determinada".
\keyword	\keyword{Formal methods}	DOC	One call per keyword, main language.
\foreignkeyword	\foreignkeyword{Métodos formais}	DOC	One call per keyword, foreign language.

Command	Example	Where	What it does
\braziliankeyword	\braziliankeyword{Métodos formais}	DOC	Portuguese keywords when the work is not in Portuguese.
\volumes	\volumes{3}	DOC	How many volumes. Nothing is printed when there is one.
\volumefiles	\volumefiles{v1,v2}	PRE	The .tex names of every volume, in order, in the preamble of all of them: the sheet count runs from the first volume to the last (2.7) and every volume carries the complete sumario (3.1.2.1.6). Compile them alternately, twice. Alias: \arquivosdosvolumes.
\volume	\volume{1}	DOC	Which volume this is.
TITLE PAGE AND CAPES SHEET — the Coleta CAPES fields print only with the dadoscoleta option			
\areaconcentracao	\areaconcentracao{Engenharia de Sistemas}	DOC	Area of concentration. On the folha adicional; on the identity sheets only under the areanafolhaderosto option.
\linhapesquisa	\linhapesquisa{Engenharia de Dados}	DOC	Research line. On the title page only under the linhanafolhaderosto option; left out or empty, nothing is printed.
\areaconcentracaonafolharosto	\areaconcentracaonafolharosto[...]	PRE	Puts the area of concentration (the diploma's) on the title page in place of the research line. Off by default; the optional text replaces it there only.
\campofolharosto	\campofolharosto{Grupo de pesquisa}{...}	DOC	Puts any label and value of yours in place of the research line. None by default.
\tipoproducao	\tipoproducao{bibliografica}	DOC	One of bibliografica, artistica, tecnologica, tecnica.
\projetovinculado	\projetovinculado{sim}	DOC	sim or nao: is there a linked research project?
\nomeprojeto	\nomeprojeto{Nome do projeto}	DOC	Its name, if there is one.
\agenciafomento	\agenciafomento{Conselho...}{CNPq}	DOC	Funding agency, full name and acronym. One call each.
\fichacatalografica	\fichacatalografica{ficha.pdf}	DOC	The official catalogue card, as a PDF from the SiBI generator.
STRUCTURE			
\maketitle	\maketitle	DOC	Typesets cover, title page and CAPES sheet. After all the data.
\frontmatter	\frontmatter	DOC	Opens the pre-textual part and typesets the approval sheet.
\mainmatter	\mainmatter	DOC	Opens the textual part. This is what starts printing the folio.
\backmatter	\backmatter	DOC	Opens the post-textual part.
\dedication	\dedication{To those who waited.}	DOC	Dedication, on a sheet of its own.
\epigrafe	\epigrafe{quotation}{author}	DOC	Epigraph (3.1.2.2.3), on a sheet of its own, after the acknowledgements.
abstract	\begin{abstract} ...	DOC	Abstract in the main language. One sheet, one paragraph, 250 words.
foreignabstract	\begin{foreignabstract} ...	DOC	Abstract in the foreign language.

Command	Example	Where	What it does
`brazilianabstract`	`\begin{brazilianabstract} ...`	DOC	Third abstract, Portuguese, for a Spanish- or French-main work.
`\configuraresumos`	`\configuraresumos{true}{true}{true}{true}`	PRE	Turns the four optional elements of every abstract sheet on or off, in every language: page identification, title and author, advising, reference. By default only the reference, as in Annexes E and F; only the abstract text itself cannot be turned off.
`\appendix`	`\appendix`	DOC	Opens the appendices: text *you* wrote.
`\annex`	`\annex`	DOC	Opens the annexes: documents you did *not* write.
`\printbibliography`	`\printbibliography`	DOC	The reference list, titled "Referências" (3.1.4.1).
`\ufrjfinalpage`	`\ufrjfinalpage`	DOC	Optional colophon, every item measured at compile time: class version, engine and its version, TeX system, LaTeX format, font family and encoding, biblatex version, date, hour, operating system and machine.

Only the table of contents is mandatory (3.1.2.1.6). Every list is optional (3.1.2.2), and a unit's norm may ask for more — see the unit's sheet.

PRE-TEXTUAL LISTS — illustrations, tables, abbreviations, symbols; contents last (3.1.2)

`\listoffigures`	`\listoffigures`	DOC	List of figures.
`\listofquadros`	`\listofquadros`	DOC	List of *quadros* (framed on all sides, unlike a table).
`\listofprogramas`	`\listofprogramas`	DOC	List of code listings.
`\listofalgorithms`	`\listofalgorithms`	DOC	List of algorithms.
`\listoftables`	`\listoftables`	DOC	List of tables, after every list of illustrations (3.1.2).
`\printloabbreviations`	`\printloabbreviations`	DOC	List of abbreviations and acronyms. No page numbers (4.1.1).
`\printlosiglas`	`\printlosiglas`	DOC	List of acronyms, when `\makelosiglas` is on.
`\printlosymbols`	`\printlosymbols`	DOC	List of symbols, in order of first appearance (3.1.2.2.7).
`\makeglossarylist`	`\makeglossarylist`	PRE	The automatic glossary (3.1.4.2). Without it, write `theglossary` by hand.
`\glossaryterm`	`\glossaryterm[key]{term}{definition}`	DOC	Registers a glossary term where it appears; prints nothing. Alphabetical, accents included.
`\printglossarylist`	`\printglossarylist`	DOC	The glossary, right after `\printbibliography`.
`\index`	`\index{term!sub|see{other}}`	DOC	Index entry (with `makeidx`). Accented entries get an unaccented sort key; `key@term` wins.
`\acron`	`\acron[key]{UFRJ}{meaning}`	DOC	Registers an acronym; `\sigla` uses it.
`\tableofcontents`	`\tableofcontents`	DOC	The table of contents. Comes last of all the lists.

ILLUSTRATIONS — caption on top, source below (2.10)

`\source`	`\source{Prepared by the author.}`	DOC	The source line, below the float. Mandatory by the norm.
`\illustrationwidth`	`\illustrationwidth{4cm}`	DOC	Inside a float: sets the caption and the source line to the width of the illustration (2.10). Alias: `\largurailustracao`.

Command	Example	Where	What it does
\fonte	\fonte{Elaboração própria.}	DOC	The same command, Portuguese name.
\cpsource	\cpsource{...}	DOC	Clash-safe alias, always available.
\cpfonte	\cpfonte{...}	DOC	Likewise.
quadro	\begin{quadro}[ht] ...	DOC	A float framed on all sides. Behaves like `figure`.
python	\begin{python}[caption={...}]	DOC	Python listing, syntax-highlighted, caption on top.
java, xml, html, prolog	\begin{java}[...] ...	DOC	The same, for those languages.
\pythoninline	\pythoninline{f(x)}	DOC	Code inside a paragraph.
\javainline	\javainline{new X()}	DOC	Likewise.
\pythonexternal	\pythonexternal{code.py}	DOC	Listing read from a file.
\javaexternal	\javaexternal{Code.java}	DOC	Likewise.
\pythonstyle	\pythonstyle	DOC	Apply a language's style without opening the environment. Also \javastyle, \xmlstyle, \htmlstyle, \prologstyle.
QUOTATIONS, ACRONYMS, SYMBOLS			
\citacao	\citacao{up to three lines}	DOC	Short quotation, inside the paragraph, in quotation marks.
longquote	\begin{longquote} ...	DOC	Quotation over three lines: indented 4 cm past the margin, smaller, single spaced, no quotation marks (2.2b).
\abbrev	\abbrev[IOT]{IoT}{Internet of Things}	DOC	Register an acronym. Optional first argument is the sort key.
\symbl	\symbl{α}{Learning rate}	DOC	Register a symbol. Same optional sort key.
\sigla	\sigla{ufrj}	DOC	Full form on first use, acronym afterwards (2.8). \sigla* forces the full form.
CITATIONS — biblatex, with the natbib layer on			
\cite	\cite{key}	DOC	(SURNAME, 2026), or (1) with `numbers`.
\citet	\citet{key}	DOC	SURNAME (2026).
\citep	\citep{key}	DOC	(SURNAME, 2026).
\textcite	\textcite{key}	DOC	Same as \citet, biblatex spelling.
\parencite	\parencite{key}	DOC	Same as \citep.
\citeauthor	\citeauthor{key}	DOC	The author alone.
\citeyear	\citeyear{key}	DOC	The year alone.
\citetitle	\citetitle{key}	DOC	The title alone.
\cite[p. 45]	\cite[p. 45, our translation]{key}	DOC	Page, and any note, in the optional argument.
\citepapud	\citepapud[45]{Original}{1953}{key-read}	DOC	Citation of a citation (4.1.2.2.1). **Three** mandatory arguments: the original author and year, which are printed as text, and the key of the work you actually read, which is the only one that enters the list. Also \citetapud.
\nocite	\nocite{key}	DOC	Into the list without citing in the text.

Full manual: `ufrj.pdf`, in Portuguese. Unit sheets: `coppe-quickref.pdf`, `poli-quickref.pdf`. Worked examples: `coppe-min-exemplo.tex` (only what is mandatory) and `coppe-max-exemplo.tex` (everything); `poli-min-exemplo.tex` and `poli-max-exemplo.tex` for an undergraduate project. Problems: https://github.com/COPPE-UFRJ/CoppeTeX/issues