

LaTeX Tutorial for IE 477/478

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Install LaTeX and TeXstudio

Where to find and how to install LaTeX?

For Windows

Download [MiXTeX](#) for Windows.

- Requires Windows 10, Windows 8/8.1 (all editions except RT).
- Download [basic-miktex-21.8-x64.exe](#) \approx 128.57 MB.
- Read [instructions on the download page](#).
- Watch [LaTeX Tutorials: How to Install LaTeX, MiKTeX and TeXstudio](#).

For Mac OS

Download [MacTeX](#) for Mac OS.

- Requires macOS 10.14, 10.15, or 11 Mojave, Catalina, or Big Sur.
- Download [MacTeX.pkg](#) \approx 4.4 GB.
- Read [instructions on the download page](#).
- Watch [How to Install LaTeX & TexStudio in Mac OS?](#) on YouTube.

Where to find and how to install TeXstudio

TeXstudio is a LaTeX editor. LaTeX is a compiler. You will type your reports in TeXstudio, but TeXstudio needs LaTeX in the background to create PDF output.

For Windows

Go to [download page](#) and find Windows section.

- Requires Windows 10.
- Download [Installer for Windows 10 \(64 bit,Qt6\) Version 4.0.1](#) and double click on it.
- Watch [LaTeX Tutorials: How to Install LaTeX, MiKTeX and TeXstudio.](#)

For Mac OS

Go to [download page](#) and find Mac OS X section.

- Requires Mac OS X 11+.
- Download [dmg file for Mac OS X 11+ Version 4.0.1](#) and start it.
If OS X complains about an unidentified developer and deny opening TXS, open the context menu on the TXS icon (Ctrl + Click) and select open.
- Watch [How to Install LaTeX & TexStudio in Mac OS?](#) on YouTube.

Configure TeXstudio

Default Compiler: Latexmk

Default compiler of TeXstudio is **PdfLaTeX**. Change it to **Latexmk**.

- Start Texstudio.
- Go to menu Options > Configure TeXstudio...
- Select **Build** from the list on the left. Find **Default Compiler** on the right.
- Press **PdfLaTeX** button across and replace it with **Latexmk** in the dropdown menu.

If you cannot find **Latexmk** in the same dropdown menu, where PdfLaTeX was present, then it also needs to be installed (next slide).

Default Bibliography: BibTeX

In the **same** Build window, **Default Bibliography** should also be listed. It should be set to **BibTeX** (for example, **not** BiBLaTeX).

Configure TeXstudio

The screenshot shows the 'Configure TeXstudio' dialog box. On the left, a sidebar lists various configuration categories: General, Commands, Build (selected), Shortcuts, Editor, Syntax Highlighting, Completion, Language Checking, Preview, Internal PDF Viewer, and SVN/GIT. Below the sidebar is an '(option filter)' text box and a 'Show Advanced Options' checkbox.

The main area is titled 'Configure TeXstudio' and contains two sections:

- Meta Commands:** A table with two columns. The left column lists categories: Build & View, Default Compiler, Default Viewer, PDF Viewer, and Default Bibliography Tool. The right column lists the selected tools: Compile & View, Latexmk, PDF Viewer, Internal PDF Viewer (Embedded), and BibTeX. Each row has a dropdown arrow, a pencil icon for editing, and a trash icon for deletion.
- User Commands:** A section for defining user commands. It features a text input field with the value '<unknown> | txs:///pdflatex | txs:///bibtex | txs:///pdflatex | txs:///pdflatex'. Below the input field is an 'Add' button with a green plus icon. To the right of the input field are icons for editing, deleting, and a minus sign.

At the bottom right of the dialog are 'OK' and 'Cancel' buttons.

Install Latexmf if it is missing

For Windows

- Install Perl from <https://strawberryperl.com/>
- Open the MikTeX Package Manager and install Latexmk package.

For Mac OS

- Open “TeX Live Utility”, search for “latexmk” and install it.

How to write and submit IE47x reports in LaTeX

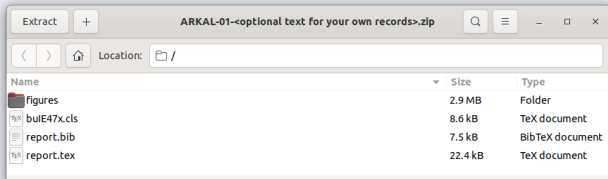
Writing your report

Download [bulE47x report latex class](#) (Report Templates in [Roadmap](#))

- Unpack the content of zip in a **new folder**.
- **latex report example.tex** is a complete example. Take a look at it for LaTeX examples (adding, math, tables, figures, references, citations.)
- **report.tex** is a template that you can fill in for all of your reports (draft/proposal, progress, final).

Submitting your report

- Zip back the folder (tex, bib, cls files and subfolders).



- Upload zip file to [Bilkent server](#).

How to write and submit IE47x reports in R Markdown

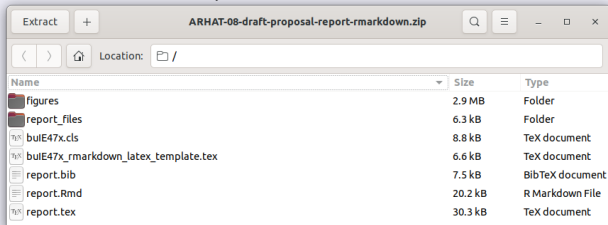
Writing your report

Download [bulE47x report rmarkdown latex template](#). (Accessible from [Roadmap](#))

- Unpack the content of zip in a **new folder**.
- **rmarkdown report example.tex** is a complete example. Take a look at it for R Markdown examples (adding, math, tables, figures, references, citations.)
- **report.Rmd** is a template for draft/ proposal, progress, final reports.
- Make sure that in YAML header **options: keep_tex: yes** has been set. This ensures tex file is produced automatically. Server will need it, you do not.

Submitting your report

- Zip back the folder (tex, bib, cls, Rmd files and subfolders).



- Upload zip file to [Bilkent server](#).