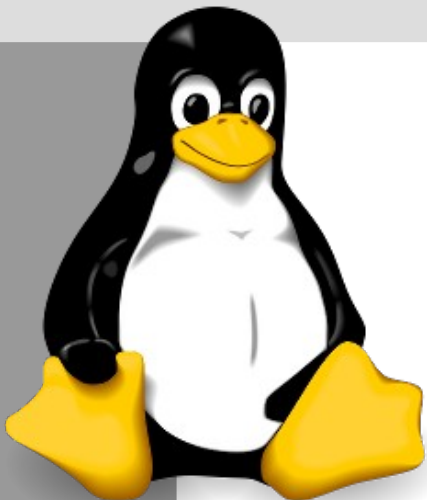


# **Introduction to the Linux Command-Line (2021)**



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Laboratory of Genomics & Bioinformatics in Parasitology  
Department of Parasitology, ICB, USP

# About this course

- Undergrad + graduate + others
- Start: **23/3** End: **11/5**
- Every Tuesday and Thursday
- From 2 PM until 6 PM
- Midterm exam on **13/4**



# About this course

**Syllabus:** <https://edisciplinas.usp.br/mod/page/view.php?id=3346292>

- Theoretical and practical. No homework, everything done in class and **in class only**. **No** make up exams or quizzes/exercises – if you missed something, it was missed forever (but: practice area available, not for points)
- No need to know anything about biology, bioinformatics or even computers (I assume you have at least used computers before though...)
- This is **NOT** a bioinformatics class!



# About this course – Topics

- **TODAY!** Intro to the course, general orientation; Quick intro to computers/computing/operating systems of the Unix family; Accessing the Command-Line Interface
- Getting help; File system structure; CLI basics, Bash shell tricks
- File ownership and permissions; computational resources
- Kinds of files; The environment; Creating, deleting, finding, renaming, copying, and moving files
- Processes and data flow (streams and pipes)

# About this course – Topics

- Dealing with file content (explore, describe, summarize, edit, subset, sort, chop, dice, join, paste, etc.)
- Data compression; Archiving
- Searching for text within files; Regular expressions
- Data transferring; File comparison
- Automating the CLI; Basics of programming
- Compiling programs; Installing programs

# About this course

**Syllabus:** <https://edisciplinas.usp.br/mod/page/view.php?id=3346292>

- Almost every class starts (**at 14:05**) with a **multiple choice test** about the content seen the previous week
- Final grade will be composed of the weighted average of the two longer **exams** (weight: **2 each**), the **daily+random quizzes** (weight: **1**), and the in-class **practical exercises** (weight: **3**)
- All exams will be performed on the computer (local and/or virtual machine); questions will be mostly practical and you can answer in the **language of your choice**



<https://edisciplinas.usp.br>

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(2020.1)



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Destaque



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Login to

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- ☐ This is a public computer
- ☐ Control which of my data is sent

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Autenticando em **dev.atp.usp.br**

Rejeitar

Aceitar



## Informações do Usuário

displayName	Joao Marcelo Pereira Alves
organizationName	Universidade de São Paulo

Para corrigir alguma informação, dirija-se a seção de alunos ou de pessoal (no caso de funcionários) de sua unidade.

**Por favor, selecione uma das opções para liberação dos atributos:**

- ☐ Pergunte-me novamente no próximo login  
Eu aceito liberar meus atributos desta vez
- ☒ Me pergunte novamente se os atributos a serem liberados para este serviço mudarem  
Eu aceito que os mesmos atributos sejam enviados automaticamente a este serviço no futuro.
- ☐ Não me pergunte novamente  
Eu aceito que **TODOS** os meus atributos sejam entregues para **QUALQUER** serviço da federação.



*Esta configuração pode ser revogada a qualquer momento na página de login*

# Introduction to the Linux Command-Line (2021)

Home / Courses / 2021 / ICB / BMP / BMP0260-21

<https://edisciplinas.usp.br/course/view.php?id=84625>

Administration

- Course administration
  - Unenrol me from BMP0260-21

Navigation

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    - EESC
    - ESALQ
    - FFCLRP
    - FEARP
    - FDRP
    - FD
    - FAU
    - FEA
    - FE
    - FFLCH
    - FCFRP
    - FCF

## Main forums and general course information

- 🗨️ Announcements
- 🗨️ General questions forum
- 👤 Let's introduce ourselves!

Please answer this introductory survey by the morning of March 23 so we can know each other in class.

### 📄 Link to the Google Meet room

Follow the link and join the call (this is teleconferencing) using your name. No need to be logged into your USP account, but better if you are (then you can join the room without me having to approve your entrance). Then turn off your camera and microphone to save bandwidth and avoid a noisy call for us all. When you need to ask a question during the class, then you can un-mute your mic for a bit then mute it again when not needed anymore. Google Meet also has a text chat where you can send questions or comments; you can use that instead if you prefer.

### 📄 Syllabus

Main source of information about the course, so please **read carefully** and always check first in case of questions about structure of course, grading, policies, etc.

### 📄 Contacting the instructor

How to contact the instructor with questions, suggestions and whatnot if the forums are not suitable.

### 📄 Bibliography

Freely available books and other resources useful for this course.

### 📄 Accessing the course's remote server

## Important readings

### 📄 How To Ask Questions Online & Actually Get Answers

**REQUIRED** reading, specially point 3 (provide enough info), this short opinion piece outlines how to properly ask questions online. Not everything there relates to this course, obviously.

### 📄 How To Ask Questions The Smart Way

This document is a classic that has been online for a **couple of decades**; it gives more detailed instruction and examples of asking technical questions online. Think of this as the long version of the article above.

# The Moodle site

- All course communication should happen using the **site's forums** – if you have a question, it is probably something other people might also need to know. Even better, **you** can answer questions!
- The “**Announcements**” forum is exclusively for... my announcements; but you are free to use the “**general questions forum**” for your questions or comments – which can be anything related to the course or its content

## General questions forum

This forum is for any question related to the course, exams, or any questions that do not fit a particular week's topic.

Press the button below to start a new discussion topic with your question or comment.

Add a new discussion topic

(There are no discussion topics yet in this forum)

◀ Announcements

Jump to...

- Press the **“add new discussion topic” button** to post a new question or comment
- You can always unsubscribe from questions that do not interest you (but you always get the first message)

# The Moodle site

- Reading material, website addresses, copies of the slides, all will be posted on the site
- All quizzes, practical exercises, and exams will **take place live, on the site**

The screenshot shows a web browser window displaying a Moodle course page. The address bar shows the URL: <https://edisciplinas.usp.br/course/view.php?id=84625>. The page title is "Introduction to the Linux Command-Line (2021)". The breadcrumb trail is: Home / Courses / 2021 / ICB / BMP / BMP0260-21. The page layout includes a left sidebar with "Administration" and "Navigation" sections. The main content area is titled "Main forums and general course information" and contains links to "Announcements", "General questions forum", "Link to the Google Meet room", "Syllabus", "Contacting the instructor", "Bibliography", and "Accessing the course's remote server". At the bottom of the page, there is a pagination bar with numbers 1 through 16, where 1 is highlighted.



# INTENSE!

- If you prefer to sit back, relax, and just watch someone talk, then this class is **not** for you!
- This is a **very active** class – quizzes and practical exercises randomly sprinkled throughout each session
- Nearly everything you do counts towards your final grade, so **missing too many classes** can have an impact there (remember: PEs and Quizzes carry half the weight!)



# Quiz time!



Go to the Moodle site and choose **First Quiz**



# Now you do it!

Go to the Moodle site and enter **Practical Exercise X**  
(after I have activated it)

Follow the instructions to answer the questions in the exercise



# About you



# About me

- **1996:** BSc Biological Sciences, USP
- **2001:** PhD from the Dept. of Parasitology, Inst. of Biomedical Sciences, USP (working on phylogeny [evolutionary biology] of amoebas of the *Acanthamoeba* genus)
- **2002-11:** Postdoctoral fellow at Virginia Commonwealth University, Richmond, VA (USA)
- **Since 2015:** Assistant Professor at the Dept. of Parasitology, Inst. of Biomedical Sciences, USP
- Research on **genomics** of unicellular parasites (mainly Trypanosomatidae and their endosymbionts) and bacteria, and **bioinformatics**