

# **Compilers (CS31003)**

## **Compilers Laboratory (CS39003)**

**Autumn 2023-24**

# Course Details

- Theory Teacher
  - Section 1: Bivas Mitra ([bivas@cse.iitkqp.ac.in](mailto:bivas@cse.iitkqp.ac.in))
  - Section 2: Pralay Mitra ([pralay@cse.iitkqp.ac.in](mailto:pralay@cse.iitkqp.ac.in))
- Lecture Hours
  - Mon (08:00-09:55), Tue (12:00-12:55)
- Evaluation
  - TA Evaluation: Marks 20 (Two Class Tests)
  - Mid Semester: Marks 30
  - End Semester: Marks 50
  - Grading will be relative
- Meeting Outside Class: By appointment through mail

# Course Materials

- Slides will be uploaded on course page
  - <https://cse.iitkgp.ac.in/~bivasm/compiler2023.html>
- Books:
  - Compilers: Principles, Techniques, and Tools (2E) by A.V. Aho, Monica S Lam, R. Sethi, Jerrey D. Ullman (Pearson / Addison-Wesley)
  - Compiler Design in C by Allen Holub
  - Modern compiler implementation in C by Appel
  - Advanced Compiler Design and Implementation by Muchnick

# Course Details

- Laboratory Teachers
  - Pralay Mitra ([pralay@cse.iitkgp.ac.in](mailto:pralay@cse.iitkgp.ac.in))
  - Bivas Mitra ([bivas@cse.iitkgp.ac.in](mailto:bivas@cse.iitkgp.ac.in))
- Laboratory Hours
  - Thurs (14:00 - 16:55)
- Evaluation
  - Assignments: Marks 40 (Individual weight of each assignment will be announced later)
  - Lab Tests: Marks 40 (Two Lab Quizzes)
  - Viva: Marks 20
  - Grading will be relative
- Meeting Outside Lab: By appointment through mail
- **Zero tolerance to plagiarized submissions.**

# Course Details

- Assignment and Lab Test submission server is Moodle.
- ◉ Please enroll as student in Moodle with password “comp23A”.
- ◉ All assignments / material will be uploaded to Moodle.
- The submissions will be accepted only through Moodle (up to a Moodle server deadline). **No submission through mail or directly to the TA will be entertained.**
- ERP will also be used at times for communication. Make sure that your registered email at ERP works.
- **Zero tolerance to plagiarized submissions.**

# Laboratory

- Assignments are individual and offline. TA interaction will be there during contact/lab hours.
- Language: C/C++
- Platform: Unix
- Tools: GNU
- Target Architecture: 64-bit
- **Please try to avoid MAC as much as possible.**

# Laboratory, Tests (Tentative Schedule)

01-08-23	Assignment 1: Understanding x86-64 Assembly	1 week
08-08-23	Assignment 2: Creation of Library in x86-64 Assembly	2 weeks
22-08-23	Assignment 3: Lexical Analyzer	1 week
29-08-23	Assignment 4: Parser	
<b>05-09-23</b>	<b>CT1, LQ1</b>	2 weeks
12-09-23	Closing of Asgn 1, 2; Show CT1, LT1 scripts	
03-10-23	Assignment 5: TAC Code Generator	2 weeks
10-10-23	Closing of Asgn 4, 5; Show Midsem scripts	
17-10-23	Assignment 6: x86 Code Generator	3 weeks
<b>31-10-23</b>	<b>CT2, LQ2</b>	
07-11-23	Closing of Asgn 5	
10-11-23	Closing of Asgn 6; Show CT2, LQ2	

# Teaching Assistants

Name	Email Address
Arpan Dam	ARPANDAM1@gmail.com
Salma Mandi	salmamandi@gmail.com
Tarannum Ara	tarannum.ara17@gmail.com
Purnima Gautam	purnimagautam94@gmail.com
Deep Majumder	deep.majumder2019@gmail.com
Nandita Sharma	nandita.sharma9494@kgpian.iitkgp.ac.in
Debraj Das	debrajccds@kgpian.iitkgp.ac.in
Dibya Kanti Haldar	dibyohaldar72@gmail.com
Athithya Prakash R	athithyap01@gmail.com
Gubbala Sai Kishor	g.chantikishore@gmail.com
Arpit Das	arpitdas38@gmail.com
Harsh Borse (administrative work)	harshzf2@gmail.com



# Important Dates

## Schedule of Tests and Examinations

Date	Event
05-Sep-2023 (6pm – 8pm)	Class Test 1 & Lab Quiz 1 (Upto Top Down Parsing & Asgn 1, 2)
September 18 – 26, 2023	MidSem Examination (Upto Syntax Directed Translation)
31-Oct-2023 (6pm – 8pm)	Class Test 2 & Lab Quiz 2 (Intermediate code generation, Run-time Environment & Asgn 3,4,5)
November 16 - 24, 2023	EndSem Examination

## List of Holidays

Date	Event
15-Aug-23	Independence Day
October 23 – 24, 2023	Autumn Break