



LAMPRÒ MELLON PROSPECTUS

DESIGN TOMORROW, TODAY



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Who Is Software Engineer?

Lamprò Mèllon is a premier recruitment - through - training organization with the aim of equipping engineers with skills in Systems-on-Chip Design (SoC) so that they can be at the forefront of the opportunities in the Semiconductor industry. We offer a 12-month training program focussed on SoC Design coupled with Project Management and communication courses to transform students into expert design engineers equipped with relevant global management skills. A majority of these trainees could be placed worldwide with an initial focus on the China and Korea.



OUR MISSION

To impart and disseminate skills to trainees so as to create expert design engineers ready for the international job market.

OUR VISION

To be Pakistan's premier training organization at the forefront of the Semiconductor revolution creating a place for Pakistan on the Systems-on-Chip (SoC) Design global map.

The training program and the approach to teaching are designed to graduate:

- “Skilled learners” with strong engineering, written and oral skills with the ability to think independently and critically and solve problems;
- “Global learners” who understand global and cross-cultural relationships, value the philosophy and history underlying the nation of Pakistan;
- “Ethical learners” who understand the consequences of their actions and are well-groomed to be active and contributing global citizens.

CREATE YOUR OWN GLOBAL CAREER

Being a part of the semiconductor sector opens doors to career paths unique in Pakistan!

INDUSTRIES

- Semiconductors
- Microelectronics

APPLICATIONS

IoT, Mobile, Cloud, AR/VR, Health, Automotive, Health, Education

ROLES

- RISC-V based SoC Designers and Managers
- SoC System Designers
- Verification Engineers and Managers
- Physical Design Engineers and Managers
- Design-for-Test Engineers
- SoC Low Power Designers
- SoC Signoff Engineers
- Embedded System Designers
- IP Creation and Porting Engineers
- Firmware Engineers

GUARANTEED JOBS WORLDWIDE

- China
- Korea
- United State: California, Texas
- United Kingdom
- Germany
- Australia
- Malaysia
- Turkey
- Pakistan



ACADEMIC PROGRAM

The Lamprò Mèllon Mechanikos Program offers a 12 Months certificate program under the guidelines of SiFive, USA; SiFan, China; and RISC-V - Pakistan. The program spans 3 semesters of 4 months each. Courses are covered in the following areas: Electrical and Computer Engineering, Computer Science, English Language, Mandarin (Chinese Language), other regional languages and Soft Skills including leadership, project planning, work organization and problem solving.

All trainees will follow a preplanned, structured course of study. Each course will be of 3 credit hours, thus, each semester students will be working on a 15 credit hour work load. The official timings are from 9:00 a.m. to 6:00 p.m. Mondays through Fridays with a lunch break from 1:00 – 2:00 p.m. The facility can stay open after 6:00 p.m. for extended work provided trainees have requested for the same through their instructor.

ENGINEERING COURSES

- Semester 1:** Computer Architecture (COEN 510)
VLSI Design (ELEN 520)
- Semester 2:** RISC-V Architecture Basic (COEN 530)
Chisel Based Design (COEN 535)
- Semester 3:** RISC-V Architecture Advanced (COEN 550)
On Boarding IP (COEN 555)

ENGLISH LANGUAGE COURSES

- Semester 1:** Fundamentals of English Language (ENGL 510)
- Semester 2:** Righting Writing Skills (ENGL 520)
- Semester 3:** Spoken English Skills (ENGL 530)

MANDARIN (CHINESE LANGUAGE) COURSES

- Semester 1:** Mandarin I (MAND 501)
- Semester 2:** Mandarin II (MAND 502)
- Semester 3:** Mandarin III (MAND 503)

SOFT SKILLS COURSES

- Semester 1:** Program Management and Scheduling Skills (SFSK 501)
- Semester 2:** Communication and Interpersonal Skills (SFSK 502)
- Semester 3:** Leadership and Conflict Resolution Skills (SFSK 503)



SEMESTER 1 COURSES

VLSI DESIGN (ELEN 520)

COURSE DESCRIPTION:

This course covers semiconductor industry, VLSI (very-large-scale-integration) and CMOS devices. SoC (system-on-a-chip) design covers specs (specification) to Silicon flow using EDA (electronic design automation) tools. The flow starts with Verilog RTL coding. Leading into design verification (functional) using SystemVerilog and UVM using simulation tools. Followed by synthesis, STA (static timing analysis) and physical design (placement, CTS, routing) and signoff. Chip packaging and post-silicon testing.

COMPUTER ARCHITECTURE (COEN 510)

COURSE DESCRIPTION:

This course covers fundamentals of computer design, RISC vs CISC, Instruction Set Architecture (ISA), pipelining, memory design. Parallelism, domain specific architectures. In this course we will also cover introduction to RISC-V architecture.

FUNDAMENTALS OF ENGLISH LANGUAGE (ENGL 510)

COURSE DESCRIPTION:

This course covers a brief yet comprehensive overview of the basics of the structure and mechanics of the English language. Students will undertake a thorough review through multiple hands-on experiences and activities. The course will draw on all five language skills: reading, writing, speaking, listening, and thinking. Some of the topics/concepts to be reviewed include: parts of speech; types of sentences; direct and indirect speech; synonyms, antonyms, and homonyms; modals; and active and passive voices.

MANDARIN 1 (MAND 501)

COURSE DESCRIPTION:

This beginners' Chinese language course, provides a brief introduction to the Chinese language, its scripts and sounds, and how words are formed. It focuses on the sound system of Mandarin Chinese (pinyin and tones) and builds an improved vocabulary and pronunciation related to name, nationalities, professions, age, daily activities, and ordering food and drinks.

PROGRAM MANAGEMENT AND SCHEDULING SKILLS (SFSK 501)

COURSE DESCRIPTION:

This course develops a foundation of concepts and solutions that support the planning, scheduling, controlling, resource allocation and performance measurement activities required for successful completion of a project. This is a scenario based course that covers program management best practices.

ACADEMIC POLICIES

ATTENDANCE REQUIREMENTS

All trainees need to be in all classes and participate actively. Attending classes is more than mere physical presence. Students are expected to be actively involved and on-task throughout the class times.

CLASSROOM EXPECTATIONS

- Trainees must respect the right of others to learn and perform.
- Silence must be maintained in all academic and work areas at all times.
- The noise level should be appropriate to the activity at hand.
- All trash and rubbish must be properly deposited in the waste bins placed for the purpose.
- All trainees are responsible for their belongings.
- All materials and equipment must be handled with care.
- Eating and drinking is prohibited in the academic and other work areas.
- Smoking is not allowed anywhere in the building.
- Punctuality is a virtue. Being tardy to class will affect your grade.
- Aimless loitering is to be avoided. Sitting in a respectful manner and working should be the norm.



ELIGIBILITY CRITERIA

- M.S / B.S. Electrical, Electronics or Computer Engineering
- M.S / B.S. Computer Science
- Fresh Graduate or with 2-3 years of experience

LAMPÒRÒ MÈLLON MICHAEL KOS PROGRAM

Pakistan's First International Train-for-Work Placement Program

- 1.** Earn up-to \$2000/month in an international work placement after successful completion of the program
- 2.** Remuneration at SiFive China/RISC-V-Pakistan is 2-3x above the market rate
- 3.** Graduates placed successfully in SiFive China will be receiving travel and boarding and lodging facilities
- 4.** 12-months rigorous train-for-work in VLSI and RISC-V based SoC design
- 5.** Project-based learning in teams to formulate solutions to complex engineering challenges
- 6.** Lamprò Mèllon transforms trainees into world-class design engineers; targeting IoT, AR/VR, mobile, cloud, automotive, health and environmental applications
- 7.** Global management expertise by in-depth training in project management, communication skills, behavioral skills, etc.
- 8.** Taught by a world-class faculty and key industry figures including the visionaries behind RISC-V
- 9.** Ability to converse in the world's second most commonly spoken language – Mandarin
- 10.** Leadership skills taught by tech gurus, seasoned entrepreneurs and serial investors

The Semiconductor Market is now valued at
\$500 BILLION
and growing, with year-on-year growth rate
of 6.49%, majority coming from the
Asia-Pacific region

Semiconductors form the underpinning of all the electronics we use in our daily lives. From the alarm clock and microwave that help us get our day started, to the cell phone and laptop that enable our workday much of what we depend on is powered by semiconductor chips, with many more applications in AI, IoT and automotive.

Asia-Pasific is the biggest market for semiconductor IP, and expected to grow at a projected CAGR of 13.1% during the forecast period of 2017-2022. The leading markets are China, Japan, South Korea, Taiwan and Singapore.

Be part of the Revolution based on Reduced Instruction Set Computer - V or **RISC-V** democratizing the SoC industry.

- ✓ Power of **OPEN SOURCE** and growing ecosystem to develop new hardware **FASTER** and more **AFFORDABLY!**
- ✓ **RISC-V** initiative has strong momentum and includes the top semiconductor companies of the world.
- ✓ **SiFive**, the pioneer of **RISC-V** architecture, is now the fastest growing semiconductor company in the world and serves 6 of the top 10 semiconductor companies in the world.

An opportunity for Pakistan in an evolving Semiconductor market

The Asia-Pacific Region will continue to be the biggest contributor to the semiconductor market, forecasted to reach a market value of **~370 Billion USD dollars by 2022**, driven primarily by China's ambitions of moving away from dependence on foreign semiconductors and South Korea's planned hefty investments in the non-memory chips.

**THESE EVOLVING MARKET DYNAMICS
WILL LEAD TO A WIDENING TALENT GAP.**

China needs to create **500,000** jobs in the semiconductor industry as part of its vision for China 2025.

Overall the semiconductor industry is experiencing strong growth forecasted to grow from **\$463.5 billion** in 2016 to **\$831.5 billion in 2024**. This phenomenal growth is led by Internet of Things (IoT), autonomous cars, **AI, health, robotics, 5G**, etc.

**PAKISTAN is an ideal location for
5000-10,000 of these jobs
in the next 4-5 years**

EACUDITY
WHO MAKE A
DIFFERENCE



DR. NAVEED SHERWANI
PhD, University of Nebraska-Lincoln
SiFive: President & CEO



DR. YUNSUP LEE
PhD, UC Berkeley, CA
SiFive: Co-Founder & CTO



DR. KRSTE ASANOVIC
PhD, UC Berkeley, CA
SiFive: Co-Founder & Chief Architect



DR. CJ DUBASH
PhD, USA, M.Ed. Science Education US,
M.Ed. School Administration US
Chief Academic Officer Lamprò Mellon



ALMAS HYDER
Harvard Business School
OPM 43, StudyBusiness Management
University of engineering and Technology
BSC in Mechanical Engineering



RAFIQ JAFFER
Government College, Lahore
M.A. Psychology



M IMTIAZ KHALID
CEO, Petrotec Intl.
Government College University
Economics



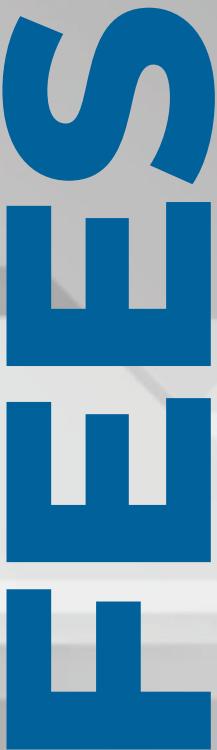
JEFF MULHAUSEN
Pennsylvania State University
B.S. Accounting Highest Honors



THOMAS XU
The University of New Mexico
MS Microelectronics
CEO SiFive China



JAFAR SAFDAR
M.S. California State University Northridge
CTO Lamprò Mellon



FEES

The candidate will need to clear these in a timely manner at each stage in order to secure a seat in the cohort.

Application/ Prospectus Fee	\$65	At time of submitting application **
Admission Test Fee	\$32	After first short-listing and prior to Admission Test date **
Registration Fee	\$65	Upon clearing Admission Test and prior to start of classes **
Security Fee*	\$195	Upon getting admission

* Refundable upon completion of program with no liabilities

** To be cleared by the given deadlines

TUITION FEES

Tuition fees are calculated at \$172 per credit
Every semester a trainee's workload is 15 credits
 $15 \text{ credits} \times \$172 = \$2580$
Each semester is of 4 months
 $\$2580 \div 4 \text{ months} = \645 per month

The program runs over 3 semesters in a year
 $\$2580 \times 3 \text{ semesters} = \$7,740 \text{ for full program}$

Trainees can pay:

- ◆ Full semester fee in one go
- ◆ In two installments every two months
- ◆ Monthly

All dues should be cleared by the first week of the month regardless of the payment plan chosen.

Actual payments will be made in PKR based on the USD exchange rate at the time.



FINANCIAL ASSISTANCE

We believe in empowering academically talented trainees who should not give up their dreams of education and a better future because of financial constraints. Lamprò Mèllon will provide financial assistance to qualifying candidates after its rigorous financial assistance assessment process on a non-discriminatory and equal opportunity basis.



This financial assistance comes in the form of a deferred payment plan. Lamprò Mèllon will place successful graduates in China and Pakistan upon clearing the final comprehensive exit exam satisfactorily. Lamprò Mèllon has agreements with corporations in both countries that 25% of the individual's salary will be given to Lamprò Mèllon on a per month basis till the financial assistance amount owed by the individual is cleared.

As collateral, the candidate will deposit his/her ORIGINAL Degree and Transcript with Lamprò Mèllon. These will be returned to the candidate once the total amount of the deferred payment through financial assistance is cleared.

If a recipient of financial assistance does NOT do well and decides to quit from the program, he/she will need to clear all outstanding dues to date before getting the original documents back.

REGULATIONS

MOBILE PHONE USE

Camera phones are not to be used to take pictures of anyone without their knowledge and permission. Posting pictures on the internet without the consent of EVERYONE in the picture is a serious offence and will be dealt with severely. If this behavior falls into the category of harassment, the trainee will be dealt with accordingly.

Trainees are not allowed to use mobile phones inside the classrooms at any time. They must be courteous of using the phone inside the academic areas so as not to disrupt classes being held. Phones should be switched off during class. Trainees using phones during class for calls, texting or disrupting class in any way will be warned and then dealt with accordingly. Repeat offenders may have their mobile phone confiscated. Mobile phones will not be allowed into an examination room for any reason.

CLASSROOM MISCONDUCT

All trainees are expected to arrive for classes on time and conduct themselves in an appropriate manner. Faculty members have the authority to deal with any student whose behavior is deemed inappropriate or disruptive.

ACADEMIC DISHONESTY

Academic standards prohibit:

- ▶ Concealing notes during examinations
- ▶ Collusions between students in examinations
- ▶ Copying the work of another student either with or without that student's knowledge during an exam
- ▶ Copy / pasting from Internet or other sources without proper citation
- ▶ Similarity Index (Turnitin) over 05% on any paper or document submitted

RIGHT TO STUDY

Any behavior that interferes with another trainee's opportunity to gain an education will be dealt with severely. These behaviors include, but are not limited to, classroom misconduct, intimidating faculty, staff or other trainees, and behavior outside of classroom spaces that interferes with classes being conducted inside.

BEHAVIOR IN ACADEMIC AREAS

Trainees should be mindful that classes are conducted throughout the day and they are expected to behave in ways that do not disrupt classes that are in session. Loud conversations or other activities in the academic areas that are disruptive are prohibited and will be dealt with accordingly.

PERSONAL PROPERTY

Trainees are responsible for their property. Bags/Backpacks should not be left unguarded at any time. Nothing of great value should be brought to class.

DESTRUCTION OF PROPERTY

Instances of destruction, defacement or damage caused to property shall be severely dealt with. The offender will be expected to pay for damages and, where appropriate, will be expected to assist in performing necessary repairs or clean up. The punishment may also include a special fine, community service, suspension or expulsion.

THEFT

Any trainee caught stealing or knowingly allowing another person to steal may be suspended or expelled.

PERSONAL VIOLENCE OR THREATENING BEHAVIOR

Trainees who fight with, threaten or intimidate any member of the community may be given detention, suspended or expelled.

BRIBERY OR COERCION

Any trainee found attempting to bribe or coerce a faculty or staff member may be suspended or expelled. Bribery is defined as offering money or other payment in return for something. Coercion is defined as threatening to cause personal or professional harm if the desired outcome is not given.

ALCOHOL AND DRUG USE

Possession, use or consumption of alcoholic beverages, hard liquor or drugs on the premises is strictly forbidden and will be severely punished.

REGULATIONS

SMOKING

Cigarette smoking within the premises is strictly prohibited. If a trainee is found smoking on the premises, he/she will be fined Rs 5,000.

WEAPONS

Possession of weapons of any kind is strictly forbidden and will be severely punished. Use of a weapon will result in expulsion without prejudice to any other legal action which the authorities would deem fit to take in view of the nature of such an offence.

SEXUAL HARASSMENT

Sexual harassment is an unacceptable behavior and such behavior will be subject to disciplinary action. Harassment refers to behaviors that are found to be offensive, threatening or disturbing to the recipient. To harass is to persistently annoy, attack, or bother someone or to interact with others in a manner which has the purpose or effect of unreasonably interfering with an individual's work performance or academic performance, or creating an intimidating, hostile, or offensive environment. Sexual harassment is defined as any unwelcome sexual advance, request for sexual favors, or other verbal or physical conduct of a sexual nature that is offensive, embarrassing, intimidating or humiliating. Specific examples include, but are not limited to:

- Touching in an inappropriate way
- Staring or leering
- Requests for sex
- Subtle pressure for sexual activity, or sexual innuendoes
- Display of sexually explicit pictures
- Repeated references to various parts of the body at inappropriate times
- Requests for dates when the other person has made it clear that she or he is not interested
- Hooting, whistles, or other suggestive noises or gestures
- Suggestive comments or jokes
- Insults, name-calling or taunts based on a person's gender
- Derogatory graffiti
- Sexually explicit e-mails, text messages, etc.
- Spreading rumors about another person's sexual behavior
- Intrusive questions about a person's private life or body
- Any behavior with members of the opposite sex that you would consider to be inappropriate if directed at a member of your family

RELIGIOUS / ETHNIC HARASSMENT

Lamprò Mèllon takes pride in being an institution where values of religious and ethnic diversity are celebrated, cherished, nurtured and perpetuated.

Our trainees are therefore considered ambassadors of harmony and diversity; they must never impose any thought, ideology or opinion that may cut through this harmonious spirit. Trainees must respect the right to free speech (in line with the law of the land and the Constitution of Pakistan) of other trainees, faculty and staff.

Incidences involving religious / ethnic harassment reported against any individual will be treated as a serious breach of code of conduct and may force senior management to dispense justice by taking serious action. Trainees exposed to religious / ethnic harassment must lodge a written complaint with the Student Affairs office.



FREQUENTLY ASKED QUESTIONS

1. How does Lamprò Mèllon learning program differ from existing programs?

Lamprò Mèllon offers a very comprehensive SoC design program. In real-work-like environment; trainees learn VLSI design, computer architecture under the guidance of semiconductor luminaries and RISC-V founders. Project-based learning throughout the program helps develop strong analytical and problem-solving skills, critically needed in high-tech industries. Lamprò Mèllon enables trainees to be well-rounded and highly skilled professionals. We believe Lamprò Mèllon is a unique program not just in Pakistan but worldwide.

2. How does Lamprò Mèllon involve trainee's in real-world work environment?

Lamprò Mèllon uses actual projects from start of the program to challenge trainees to find solutions for complex problems. Trainees, work on individual as well as team projects with precisely defined deliverables and tight schedules. These projects are evaluated across a range of technical and soft skills matrix. Lamprò Mèllon prides itself in transforming trainees into expert SoC designers with technical, leadership program management skills complemented with strong communication and documentation prowess.

3. Why is Lamprò Mèllon program more expensive than other programs?

Lamprò Mèllon curriculum in its entirety covers semiconductor industry, strong English communication and written skills, target market work-ethics and culture and finally with critical soft skills. This curriculum is delivered by a world-class faculty using state-of-the-art labs. This whole environment and infrastructure require significant financial resources. Based on the strength of our program we guarantee employment for all trainees.

4. Is the Lamprò Mèllon program accredited in Pakistan and overseas?

Lamprò Mèllon is a unique train-for-work program developed in close association with RISC-V Foundation and Global Semiconductor Alliance (GSA).

Lamprò Mèllon is working with institutions in Pakistan and overseas to get accreditation for its project-based learning program.

5. What is the confirmation that someone enrolled in the program will actually be placed either in Pakistan or overseas?

Lamprò Mèllon is committed to place all trainees who pass the “exit test” of the program.

6. Can a trainee be placed in China, Pakistan or other locations before completing the 12-month program?

Yes, if a trainee passes the final “exit test” he or she can start work any time during the program; either in China, Pakistan or other locations.

7. How long has Lamprò Mèllon existed as a company?

Lamprò Mèllon is a relatively new company and was registered recently in Pakistan. Founders of Lamprò Mèllon have extensive industry experience working in Silicon Valley, CA, USA and other locations. The faculty has rich industry experience in USA and worldwide.

8. Who has funded Lamprò Mèllon?

Lamprò Mèllon is a private company and has been funded by semiconductor companies in USA and China.

9. What is the criterion to be eligible for financial assistance?

Lamprò Mèllon is committed to finding and training the most talented individuals. All students who have strong academic background, pass the admission test and successfully complete the interview process can be provided financial assistance.

10. Do you need to know RISC-V to be part of the Lamprò Mèllon program?

Knowing RISC-V is not a prerequisite to joining the Lamprò Mèllon program. RISC-V is covered extensively throughout the Michanikos program. RISC-V usage in SoC design is seeing exponential growth.

11. Can I apply for the Lamprò Mèllon program if I have taken digital design, computer architecture, semiconductor classes in a regular B.Sc. and M.Sc. program?

Yes, you can apply and take the admission test. If you pass the admission test and successfully go through the interview process you can join the program.

12. Will Lamprò Mèllon handle visa requirements for working overseas?

Lamprò Mèllon will process all the paperwork needed related to placement of trainees in overseas locations.

13. I'll be completing my B.S./M.S. program in December; how can I join the program?

Lamprò Mèllon first cohorts will be starting the program in October. Second cohorts will start the session in Jan 2020.

14. Will Lamprò Mèllon be expanding into other cities in Pakistan?

Lamprò Mèllon's first focus is to produce high-quality experts in the semiconductor and SoC design space at our Lahore facility. We are confident that Lamprò Mèllon will be expanding to multiple locations in Pakistan in the future.

15. SoC design requires expensive EDA design tools; will Lamprò Mèllon provide these tools?

Lamprò Mèllon's program based on the technical requirements will be using EDA tools (free-ware). They will be provided to the trainees.

16. Can I visit Lamprò Mèllon facility before I apply for the program?

Professionals interested in Lamprò Mèllon program should attend one of the events we have planned in multiple locations. We are also sharing details of the program online. If you have any further questions, we encourage you to contact us online, we guarantee follow-up on all queries.

17. Lamprò Mèllon is targeting semiconductor industry, are soft skills courses relevant?

Lamprò Mèllon has developed a very comprehensive program based on professional experience working at leading semiconductor industries. Leading high-tech companies in the SoC design require well-rounded engineers. At Lamprò Mèllon we have developed a program that uses project-based training to develop program management, communication skills, technical documentation, project management, leadership and conflict resolution. These skills are essential to be a fully proficient engineer on day-one.

18. Is Lamprò Mèllon affiliated with any universities overseas or in Pakistan?

Lamprò Mèllon technical program has been developed keeping abreast of semiconductor programs at world-class universities in USA, such as UC Berkeley, UT Austin and others. To ensure our program is up to snuff with the latest technologies and trends we are working closely with RISC-V Foundation and Global Semiconductor Alliance (GSA). Our program is a rich collection of latest technological advancements, thoughtfully complemented with English language, soft skills and target market work-ethics and culture. Lamprò Mèllon program has very strong linkages with SiFive USA, SiFive China. This is critical to be able to have a world-class technical program that is tailored for semiconductor market needs worldwide.





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