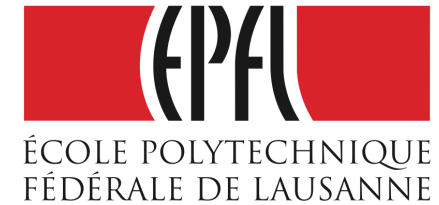


VERIFIED

CERTIFICATE *of* ACHIEVEMENT



Juergen Brugger

Professor, School of Engineering

Ecole Polytechnique Fédérale de Lausanne

Martin Gijs

Professor, Institute of Microengineering

Ecole Polytechnique Fédérale de Lausanne

This is to certify that

Nishant Mishra

successfully completed and received a passing grade in

memsX: Micro and Nanofabrication (MEMS)

a course of study offered by EPFLx, an online learning initiative of Ecole Polytechnique Federale de Lausanne through edX.



VERIFIED CERTIFICATE
Issued February 27, 2017

VALID CERTIFICATE ID
[a3f6d66139024e2aa651e234a18baa95](https://courses.edx.org/certificates/a3f6d66139024e2aa651e234a18baa95)

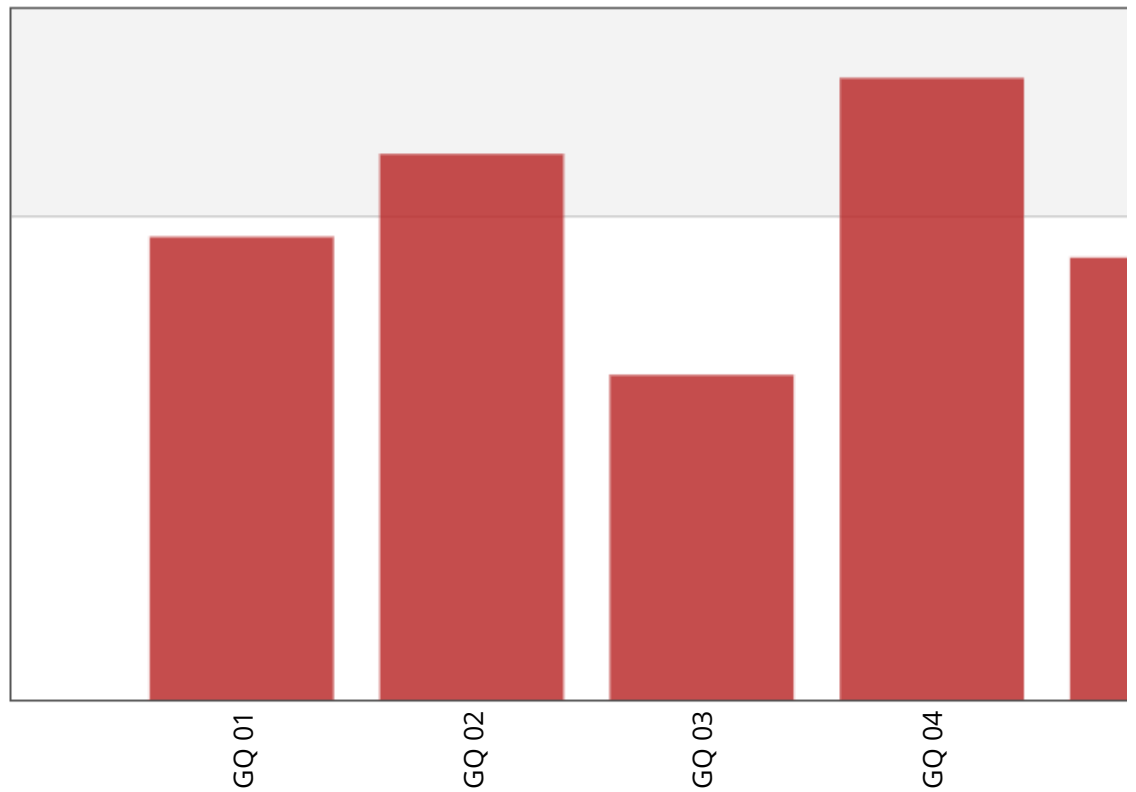


Course Progress for Student 'Nishmish' (nishant.mishra.nm@gmail.com)

Your certificate is available

You've earned a certificate for this course.

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Certificate](#)



Preamble

Welcome

No problem scores in this section

What this course is about

No problem scores in this section

Practical information

No problem scores in this section

Week 1:
MEMS and
cleanroom
introduction

Introduction

Practice Scores: 0/0

Successful MEMS and bimorph case study.

Practice Scores: 0/0 0/0

Cleanroom basics and CMI overview

Practice Scores: 0/0

Conclusion and summary.

No problem scores in this section

Graded quiz (8/12) 67%

Graded Quizzes *due Feb 25, 2017 17:30 IST*

Problem Scores: 8/12

Week 2:
Chemical
vapor

deposition
(CVD)

Introduction

No problem scores in this section

Overview of CVD techniques

Practice Scores: 0/0 0/0 0/0

Theoretical aspects of CVD

Practice Scores: 0/0 0/0

Specific CVD processes

Practice Scores: 0/0 0/0

Conclusion and summary.

No problem scores in this section

Graded quiz (11/14) 79%

Graded Quizzes *due Feb 25, 2017 17:30 IST*

Problem Scores: 11/14

Week 3:
Physical
vapor
deposition
(PVD)

Introduction

Practice Scores: 0/0

Thermal evaporation

Practice Scores: 0/0 0/0

Sputtering

Practice Scores: 0/0 0/0 0/0

Other PVD methods

Practice Scores: 0/0

Film growth

Practice Scores: 0/0

Conclusion and summary

No problem scores in this section

Graded quiz (7/15) 47%

Graded Quizzes *due Feb 25, 2017 17:30 IST*

Problem Scores: 7/15

Week 4:
Lithography

Introduction

Practice Scores: 0/0

General concepts of lithography.

Practice Scores: 0/0

UV lithography.

Practice Scores: 0/0 0/0 0/0 0/0

Electron beam lithography.

Practice Scores: 0/0 0/0 0/0

Alternative patterning methods

Practice Scores: 0/0

Conclusion and summary.

No problem scores in this section

Graded quiz (19/21) 90%

Graded Quizzes *due Feb 25, 2017 17:30 IST*

Problem Scores: 19/21

Week 5:
Dry
etching
(DE)

Introduction

No problem scores in this section

Overview of dry etching techniques

Practice Scores: 0/0 0/0

Theoretical concepts of dry etching

Practice Scores: 0/0

Dry etching experimental systems

Practice Scores: 0/0 0/0

Specific dry etching processes

Practice Scores: 0/0 0/0

Conclusion and summary.

No problem scores in this section

Graded quiz (9/14) 64%

Graded Quizzes *due Feb 25, 2017 17:30 IST*

Problem Scores: 9/14

Week 6:
Wet
etching
(WE)

Introduction

Practice Scores: 0/0

Wet etching of oxides

Practice Scores: 0/0

Isotropic and anisotropic wet etching of silicon

Practice Scores: 0/0 0/0

Bulk and surface micromachining of silicon

Practice Scores: 0/0 0/0

Conclusion and summary.

No problem scores in this section

Graded quiz (12/13) 92%

Graded Quizzes *due Feb 25, 2017 17:30 IST*

Problem Scores: 12/13

Goodbye
note

Farewell

No problem scores in this section