Curriculum vitae

PERSONAL INFORMATION Nishant Mishra

- New Delhi (India)
- mishant.mishra.nm@gmail.com
- 1 https://nishantmishranm.wixsite.com/welcome

WORK EXPERIENCE

Dec 2017–Present Research Intern

Indian Institute of Technology Delhi, New Delhi (India)

- Characterized a Bioimpedance sensor for bacteria detection
- Fabricating and characterizing a Polysaccharide-based Resistive memory device on a flexible substrate
- Characterizing a BioFET sensor for bacteria detection

1 Jun 2017–1 Aug 2017 Research Intern

Indian Institute of Technology Delhi, New Delhi (India)

Fabricated and characterized a Protein-based Resistive memory device on a flexible substrate

Aug 2016–Dec 2017 Member, Electronics Club GTBIT

IEEE GTBIT, New Delhi (India)

- Conducted an academic-industry workshop on Renewable Energy resources
- Conducted a two day hardware hackathon

Aug 2015-Aug 2016 Member, IEEE

IEEE GTBIT, Delhi (India)

- Taught a Special Interest Group on basics of C
- Conducted a quiz titled "TechQuIEEZ" on IEEE Day 2015
- Conducted mock Group Discussions and Personal Interviews on IEEE Day 2015

EDUCATION AND TRAINING

Aug 2014–May 2018 Bachelor's of Technology in Electrical and Electronics Engineering

EQF level 6

Guru Tegh Bahadur Institute of Technology (affiliated with Guru Gobind Singh Indraprastha University), New Delhi (India)

2013–2014 All India Senior School Certificate Examination

EQF level 4

Delhi Public School, R. K. Puram, New Delhi (India) Mathematics, Physics, Chemistry, Computer Science, English

2011–2012 All India Secondary School Certificate

EQF level 2

Delhi Public School, R. K. Puram, New Delhi (India)

Mathematics, Science, Social Studies, Computer Science, English, Hindi

Feb 2017 Micro & Nano fabrication (MEMS) (MOOC)

École Polytechnique Fédérale de Lausanne (EdX), Lausanne (Switzerland)

Curriculum vitae Nishant Mishra

Related document(s): EPFLx memsX Certificate edX.pdf, EPFLx memsX transcript.pdf

Jun 2018 Nanotechnology for Health (MOOC)

University of Twente (FutureLearn), Enschede (Netherlands)

Related document(s): nanotechnology-health_certificate_of_achievement_3f5mzhu.pdf

Nov 2018 Circuits and Electronics 1: Basic Circuit Analysis (MOOC)

Massachusetts Institute of Technology (EdX), Cambridge (United States)

Related document(s): MITx 6.002.1x Certificate edX.pdf, MITx 6.002.1x Transcript.pdf

Sep 2016 The Arduino Platform & C Programming (MOOC)

University of California, Irvine (Coursera), Irvine (United States)

Related document(s): UC Irvine Arduino.pdf

PERSONAL SKILLS

Foreign language(s)

UNDERSTANDING SPEAKING WRITING

Listening Reading Spoken interaction Spoken production

C2 C2 C2 C1 C2

English

Test of English as a Foreign Language (TOEFL)

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user Common European Framework of Reference for Languages

Job-related skills

- Physical Vapour Deposition using Varian 3117 Thermal evaporator
- Semiconductor characterization using Keithley 4200 and 4200A parameter analyzers.
 Experience with Keithley 2636B, Keithley 2400 SMUs
- Electrochemical Impedance Spectroscopy using BioLogic SP-150 Potentiostat
- Mask designing using ProjeCAD and IntelliCAD
- Data analysis and plotting using Origin 2019
- Infrared Spectrum analysis using Thermo Scientific Nicolet iN10MX infrared imaging microscope
- UV-Vis Spectrum analysis using Eppendorf Biospectrometer
- Silver Nanoparticle Synthesis using chemical & biological synthesis
- SEM image measurements using ImageJ
- Rapid prototyping using Arduino microcontroller environment
- Circuit simulation using Mathworks MATLAB
- Basic Object Oriented Programming using C++

Digital skills

GAIT Certified IT Professional – Bronze

Demonstrated basic comprehension and knowledge needed for an entry-level position.

ADDITIONAL INFORMATION

Publications

Vancomycin functionalized WO3 nanomaterial-based impedance sensor for efficient capture and highly selective detection of Gram-positive bacteria

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Submitted to Biosensors and Bioelectronics on 9 Nov 2018, Under Review

Conferences

Reconstituted Fe-Azurin based device for resistive memory switching

Submitted extended abstract to the International Workshop on the Physics of Semiconductor Devices, 2017

Functionalized tungsten oxide nanomaterial-based sensor for selective bacterial detection Submitted abstract to the 6th International Conference on Biosensing Technology 2019

Honours and awards

- March 2016- Second Place in Tesla Turbulence -IEEE GTBIT: Quiz on hardware, networking, electronics, logic, mounting and assembly
- 2010-2012- Second Green Badge for academic excellence for two consecutive years Delhi Public School, R.K. Puram
- 2006-2009- Scholar Badge for academic excellence for three consecutive years Delhi Public School, R.K. Puram

ANNEXES

- EPFLx memsX Certificate edX.pdf
- nanotechnology-health certificate of achievement 3f5mzhu.pdf
- UC Irvine Arduino.pdf
- MITx 6.002.1x Certificate _ edX.pdf
- EPFLx memsX transcript.pdf
- MITx 6.002.1x Transcript.pdf

EPFLx memsX Certificate _ edX.pdf @

11/18/2018

EPFLx memsX Certificate | edX





Juergen Brugger
Professor, School of Engineering
Ecole Polytechnique Fédérale de Lausanne

Martin Giis

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.



VALID CERTIFICATE ID a3f6d66139024e2aa651e234a18baa95

https://courses.edx.org/certificates/a3f6d66139024e2aa651e234a18baa95

1/1

nanotechnology-health_certificate_of_achievement_3f5mzhu.pdf @





28th June 2018. futurelearn.com/certificates/3f5mzhu

Nishant Mishra

has completed the following course:

NANOTECHNOLOGY FOR HEALTH: INNOVATIVE DESIGNS FOR MEDICAL DIAGNOSIS UNIVERSITY OF TWENTE

This online course explored the domain of Nanotechnology for Health by focusing on what nanotechnology is, how devices are developed and how they work to innovate the design of medical diagnosis. It also covered the ethical and societal implications in this area.

4 weeks, 3 hours per week

Martin Bennink

Assistant Professor and Lecturer
University of Twente

Evert Houwman
Senior Researcher and Lecturer
University of Twente

UNIVERSITY OF TWENTE.

The person named on this certificate has completed the activities in the attached transcript. For more information about Certificates of Achievement and the effort required to become eligible, visit futurelearn.com/proof-of-learning/certificate-of-achievement.



The person named on this certificate has verified their identity. To read more about how FutureLearn verifies identities, visit futurelearn.com/verification/how-it-works. The certificate and transcript do not imply the award of credit or the conferment of a qualification from University of Twente.

UNIVERSITY OF TWENTE.



Nishant Mishra

has completed the following course:

NANOTECHNOLOGY FOR HEALTH: INNOVATIVE DESIGNS FOR MEDICAL DIAGNOSIS UNIVERSITY OF TWENTE

Nanotechnology is used to control and manipulate nanometer-sized matter with nanometer precision. It offers great potential in new medical diagnostic or screening tools, and inspires us to create new devices that can be used to diagnose a disease or monitor a medical treatment. This course focussed on three different developments: how the devices work, how they are made, and the role of nanotechnology. It also covered the ethical and societal implications of nanotechnology in healthcare.

STUDY REQUIREMENT

4 weeks, 3 hours per week

LEARNING OUTCOMES

- Describe technology and the science of nanotechnology
- Investigate the relationship between nanotechnology and the medical application
- Engage in the underlying science and technology and techniques used to fabricate nano devices
- Discuss societal and ethical questions that arise from new technological developments in the health domain

SYLLABUS

- Introduction to the technology and science of nanotechnology.
- The relation between nanotechnology and medical applications.
- The impact and possible consequences of new techniques for ethical questions and societal behaviour.

- Introduction to the underlying science and technology of nanotechnology developments and of the techniques used to produce devices that use nanotechnology.
- Nano and breath: Electronic nose; Nano and blood: Lab-on-a-chip; Nano and urine: Cancer detection.
- Example cases where new technology is not an independent development but arises from societal questions, and in turn also creates new societal and ethical questions.

This transcript should be read alongside the accompanying Certificate of Achievement.

For more information about transcripts visit futurelearn.com. Issued 28th June 2018. futurelearn.com/certificates/3f5mzhu



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1/4/2019

MITx 6.002.1x Certificate | edX



successfully completed and received a passing grade in



Anant Agarwal

Professor, Department of Electrical Engineering and Computer Science

Massachusetts Institute of Technology

Graduate Instructor, Department of Electrical Engineering and Computer Science

> Vice President for Open Learning Massachusetts Institute of Technology

Analysis a course of study offered by MITx, an online learning initiative of the Massachusetts

6.002.1x: Circuits and Electronics 1: Basic Circuit

VERIFIED CERTIFICATE Issued November 17, 2018

Institute of Technology through edX.

This is to certify that

Nishant Mishra

VALID CERTIFICATE ID 02e0ed04ebe3460895ef48d1de8c6f5c

https://courses.edx.org/certificates/02e0ed04ebe3460895ef48d1de8c6f5c

EPFLx memsX transcript.pdf @

11/22/2018

memsX Progress | edX

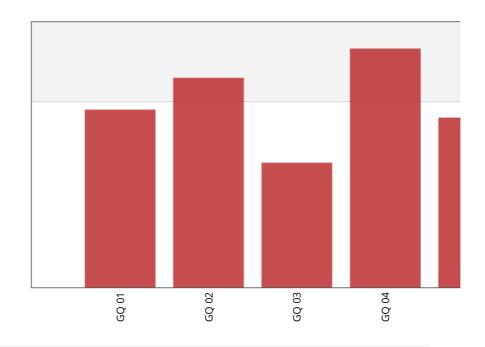


Course Progress for Student 'Nishmish' (nishant.mishra.nm@gmail.com)

Your certificate is available

You've earned a certificate for this course.

<u>View</u> <u>Certificate</u>



Preamble

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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

<u>Successful MEMS and bimorph case</u> <u>study</u>

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

memsX Progress | edX

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) 11/22/2018 memsX Progress | edX

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

memsX Progress | edX

Practice Scores: 0/0

<u>UV lithography</u>

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)

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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) 11/22/2018 memsX Progress | edX

Introduction

Practice Scores: 0/0

Wet etching of oxides

Practice Scores: 0/0

<u>Isotropic and anisotropic wet etching</u> <u>of silicon</u>

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

<u>Farewell</u>

No problem scores in this section

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11/22/2018

6.002.1x Progress | edX

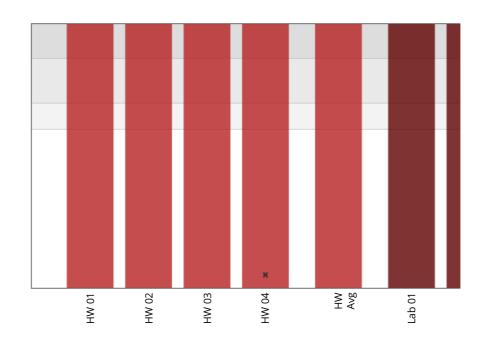


Course Progress for Student 'Nishmish' (nishant.mishra.nm@gmail.com)

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Textbook

Textbook

No problem scores in this section

Overview

6.002.1x Progress | edX

Introduction to Circuits and Electronics

No problem scores in this section

Using the Tools

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

0/0 0/0 0/0

Circuit Sandbox

Practice Scores: 0/0

Math Review

First Order Differential Equations

No problem scores in this section

Second Order Differential Equations

No problem scores in this section

Complex Numbers

No problem scores in this section

Calculus at Length

No problem scores in this section

Entrance Survey

Entrance Survey

No problem scores in this section

6.002.1x Progress | edX

Circuit Elements

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

Circuit Analysis Toolchest

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

Week 1 Tutorials

No problem scores in this section

Homework 1 (23/23) 100%

Homework

Problem Scores: 6/6 12/12 5/5

Lab 1 (2/2) 100%

Lab

Problem Scores: 2/2

6.002.1x Progress | edX

Linearity and Superposition

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

0/0 0/0

Static Discipline and Boolean Logic

Practice Scores: 0/0 0/0

Week 2 Tutorials

No problem scores in this section

Homework 2 (12/12) 100%

Homework

Problem Scores: 4/4 3/3 5/5

Lab 2 (1/1) 100%

Lab

Problem Scores: 1/1

11/22/2018 6.002.1x Progress | edX

Inside the Gate

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

Circuits with Nonlinear Elements

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

Week 3 Tutorials

No problem scores in this section

Homework 3 (24/24) 100%

Homework

Problem Scores: 9/9 7/7 4/4 4/4

Lab 3 (1/1) 100%

Lab

Problem Scores: 1/1

6.002.1x Progress | edX

Incremental Analysis

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

Dependent Sources and Amplifiers

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

Week 4 Tutorials

No problem scores in this section

Homework 4 (17/17) 100%

Homework

Problem Scores: 4/4 9/9 4/4

Lab 4 (2/4) 50%

Lab

Problem Scores: 2/4

Practice Exam Problems (Not Graded)

Practice Exam Problems

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

Exit Survey

Exit Survey

No problem scores in this section

Final Exam

6.002.1x Progress | edX

Final (85/100) 85%

Final

Problem Scores: 0/10 10/15 15/15

15/15 15/15 15/15 15/15

Optional Material

Week 2: Logic Gates

No problem scores in this section

Week 2: Worked Problems

No problem scores in this section

Week 2: Worked Problems

No problem scores in this section

Week 2: Bonus Material

No problem scores in this section

Week 2: Bonus Material

No problem scores in this section

Week 3: Comparing noise margins

No problem scores in this section

Week 3: Truth Table to a Circuit

No problem scores in this section

Week 3: MOSFET power dissipation

No problem scores in this section

Week 3: Load-lines

No problem scores in this section

Week 4: Current-controlled attenuator

No problem scores in this section

Week 4: Small Signal
No problem scores in this section

Week 4: Load Line
No problem scores in this section

Week 4: Dependent Source
No problem scores in this section