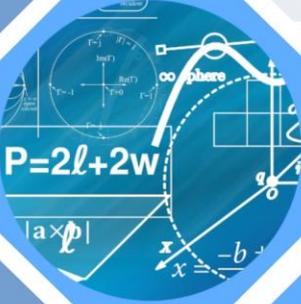
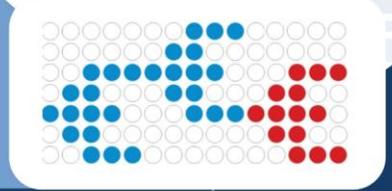




# POSTGRADUATE HANDBOOK



**2024-2025**

Department of Electrical and Electronic  
Engineering  
Faculty of Engineering  
University of Peradeniya  
Sri Lanka





# **Postgraduate Handbook**

**2024 - 2025**

**Department of Electrical and Electronic Engineering  
Faculty of Engineering  
University of Peradeniya**



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# WELCOME TO THE UNIVERSITY OF PERADENIYA AND FACULTY OF ENGINEERING



**Prof. M.D. Lamawansa**  
Vice Chancellor  
University of Peradeniya



**Dr. U. I. Dissanayake**  
Dean  
Faculty of Engineering



# DEPARTMENT OF ELECTRICAL AND ELECTRONIC ENGINEERING



## Message from the Head of the Department

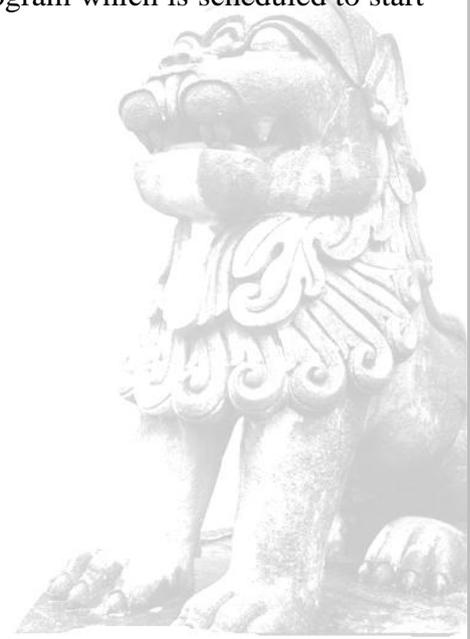


The Department of Electrical and Electronic Engineering, University of Peradeniya offers its Regular MSc program for the 23<sup>rd</sup> consecutive year and the Double Degree Master program in Wireless Communications Engineering for the 6<sup>th</sup> consecutive year in Sri Lanka. The regular postgraduate program has been designed in such a way that there are three specializations in the MSc Engineering program: Electrical Power Applications, Communication and Information Engineering, and Control & Instrumentation. In addition, the candidates are given the flexibility to choose either the taught course option or the research option to progress their careers within the industrial and research environments. In the double degree program conducted by the University of Peradeniya and the University of Oulu Finland, the candidates can get two degrees from the two Universities.

The Department of Electrical and Electronic Engineering is one of the pioneering research institutes of Sri Lanka having many researchers with high h-indexes including the top 2% researchers in the world. The research and development activities within the department have progressed exponentially within the last two decades. The department has more than 20 full-time teaching panel with PhDs from a wide spectrum of areas within Electrical and Electronic Engineering, who could actively contribute towards teaching and research projects in the postgraduate program. The department is also well equipped with modern laboratory facilities to facilitate the teaching and research activities for the postgraduate program. We cordially invite the prospective candidates to join our postgraduate program which is scheduled to start in early 2024.

**Prof. B. G. L. T. Samaranayake**

**Head  
Department of Electrical & Electronic Engineering**





# WELCOME TO THE DEEE POSTGRADUATE PROGRAM

## Message from the Postgraduate Coordinators

Welcome to the postgraduate program of the Department of Electrical and Electronic Engineering, University of Peradeniya. This prospectus provides information about the postgraduate program offered by the Department of Electrical and Electronic Engineering and the facilities available for the program at the Department.

The department offers the following regular postgraduate degree programs:

- The Postgraduate Diploma in Engineering (PG.Dip.)
- The Degree of Master of Engineering (M.Eng.)
- Masters Degree
- The Degree of Master of the Science of Engineering (M.Sc.Eng.)
- The Degree of Master of Science (M.Sc)
- The Degree of Master of Philosophy (M.Phil)
- The Degree of Doctor of Philosophy (Ph.D.)

The Degree of Master of Science of Engineering and Degree of Master of Science programs have been conducted from the year 2000 onwards. Registered students for the program have gradually increased and at present over forty students register yearly. The syllabi of the program were updated in 2015. With the new program, it is possible to specialize in three fields namely:

- Electric Power Applications
- Communication and Information Engineering
- Control and Instrumentation

In 2017, we initiated a Double Degree M.Sc. Eng. in Wireless Communications in collaboration with the University of Oulu, Finland. This is a two-year M.Sc. program where the first year and second year will be completed at the University of Peradeniya and the University of Oulu respectively. The program was commenced in 2018. With this program, students will be able to obtain world-recognized M.Sc. Eng. in wireless communications.

The teaching panel of the program is over 25 academic staff members with PhDs. The research areas of the staff cover a wide spectrum of Electrical and Electronic Engineering. Therefore, the department has a strong research team to pursue your research degrees. Further up-to-date facilities of the department enable you to conduct a wide range of research.

Please do not hesitate to contact respective coordinators to clarify your doubts about the degree programs offered by the Department.

**Dr. W. A. N. I. Harischandra**

**Coordinator, PG Program in Electrical and Electronic Engineering**

**Dr. D. M. I. S. I. Dasanayake**

**Coordinator, Double Degree Program in Wireless Communications**

# POSTGRADUATE PROGRAM

## OBJECTIVES

The prime objective of the postgraduate program in the Department of Electrical and Electronic Engineering is to cater to the continuing education needs of Engineers practicing in industry in a broad range of sub-disciplines in Electrical Engineering. Three major aspects are considered in this regard:

- Further strengthening the theoretical background of candidates.
- Providing the candidates sufficient exposure to research in the relevant disciplines so that the motivation to carry out research and development within their respective industries is enhanced.
- Obtaining feedback from the industry to update the academic programs to suit the needs of the industry.

## POSTGRADUATE PROGRAMS OFFERED

The department offers the following regular postgraduate degree programs:

- The Postgraduate Diploma in Engineering - PG. Dip. (SLQF L8)
- Masters Degree (SLQF L9)
- The Degree of Master of Engineering - M.Eng. (SLQF L9)
- The Degree of Master of Science - M.Sc. (SLQF L10)
- The Degree of Master of the Science of Engineering - M.Sc. Eng. (SLQF L10)
- Double Degree of Master of Science of Engineering specializing in Wireless Communications - M.Sc.Eng. (SLQF L10)
- The Degree of Master of Philosophy - M.Phil. (SLQF L11)
- The Degree of Doctor of Philosophy - Ph.D. (SLQF L12)

Application, registration, evaluation and transfer procedures, admission requirements and methods of processing applications for all postgraduate degree programs mentioned above are drawn from the guidelines provided in the document titled "General Regulations for the Postgraduate Programs in the Faculty of Engineering". SLQF is the Sri Lanka Qualifications Framework.

## FIELDS OF SPECIALIZATION

- Electrical Power Applications
- Communications and Information Engineering
- Controls and Instrumentation
- Wireless Communications Engineering (Double Degree Program)

## ADMISSION REQUIREMENTS

### ***PG.Dip. in Engineering (SLQF L8)***

- A bachelor's degree acceptable to the Faculty Higher Degrees Committee or
- Such other qualifications as may be approved by the Faculty Higher Degrees Committee as suitable for candidature for PG.Dip. in a field related to the program of study.

### ***Master of Engineering (SLQF L9)***

- A bachelor's degree in engineering with First- or Second-class Honours or
- A bachelor's degree in engineering with acceptable postgraduate qualifications or a minimum of one year's experience after obtaining the Degree qualifications in a field related to the program of study.
- A degree or such other qualification equivalent to a bachelor's degree in Engineering as may be approved by the Faculty Higher Degrees Committee as suitable for candidature for the M.Eng. Degree with a minimum of one year's experience, after obtaining the degree or such qualifications in a field related to the program of study.

### ***Masters Degree (SLQF L9)***

- A bachelor's degree with First- or Second-class Honours or
- A bachelor's degree with acceptable postgraduate qualifications or a minimum of one year's experience after obtaining the Degree qualifications in a field related to the program of study.
- A degree or such other qualification equivalent to a bachelor's degree in Engineering as may be approved by the Faculty Higher Degrees Committee as suitable for candidature for the Masters. Degree with a minimum of one year's experience, after obtaining the degree or such qualifications in a field related to the program of study.

### ***M.Sc. in Engineering (SLQF L10)***

- A bachelor's degree in engineering with First- or Second-class Honours or
- A bachelor's degree in engineering with acceptable postgraduate qualifications or
- A degree or such other qualification equivalent to a bachelor's Degree in Engineering as may be approved by the Faculty Higher Degrees Committee as suitable for candidature for the M.Sc.Eng. Degree with a minimum of one year's experience, after obtaining the degree or such qualifications in a field related to the program of study.

### ***M.Sc. (SLQF L10)***

- A bachelor's degree with First- or Second-class Honours or
- A bachelor's degree with acceptable postgraduate qualifications or a minimum of one year's experience after obtaining the degree, in a field related to the program of study or
- A degree or such other qualification as may be approved by the Faculty Higher Degrees Committee as suitable for candidature for the M.Sc. Degree with a minimum of one year's experience, after obtaining the degree or such qualifications in a field related to the program of study.

For the admission requirements for the M.Phil. and Ph.D. degrees, refer to the guidelines "General Regulations for the Postgraduate Programs in the Faculty of Engineering".

# ELIGIBILITY AND REQUIREMENTS FOR THE REGULAR PROGRAM

## Eligibility

Postgraduate Degrees	Requirements	
	Credits from Course units	Research
PG.Dip.	25	Independent/Advanced study (at least 3 credits)
M.Eng./Masters	30	Advanced study (at least 5 credits)
M.Sc.Eng./M.Sc.	30	Research study of 30 credits

## Breakdown of course component

Postgraduate Degrees (Credits from course units)	Breakdown	
PG.Dip. (25 credits)	Core course credits	9
	Technical Elective course credits	12
	Compulsory courses (EE652, EE653)	4
M.Eng./Masters (30 credits)	Core course credits	9
	Technical Elective course credits	15*
	Compulsory courses (EE652, EE654)	6
M.Sc.Eng./M.Sc. (30 credits + Research)	Core course credits	9
	Technical Elective course credits	21
	Postgraduate Research (EE659)	30

\* Minimum 9 from courses related to the stream and maximum 6 from courses related to the other streams

**Note:** The minimum Grade Point Average requirement from the claimed courses for PG.Dip. is 2.75 and for M.Eng./ Masters/ M.Sc.Eng./ M.Sc. degrees is 3.00. For the EE652, EE653, and EE654 courses, the final grade should be "B" or above. Course units are 3 credits, and each credit carries the equivalent of 15 lecture hours.

## Maximum duration

Degree/Diploma	Duration (Full-time*)	Maximum duration (Full-time*)
PG.Dip	10 months	2 years
M.Eng/ Masters	1 year	3 years
M.Sc.Eng/ M.Sc.	2 years	4 years

\* Equivalent Part-time duration is 1.5 times the full-time duration

# ELIGIBILITY AND REQUIREMENTS FOR THE DOUBLE DEGREE PROGRAM

*This double-degree program is designed for students interested in pursuing postgraduate studies in wireless communications. It offers the opportunity to earn an MSc.Eng. degree from the highly respected University of Peradeniya and Oulu University in Finland at the same time. In addition to providing the chance to earn double degrees, the program also offers the opportunity to study at Oulu University, one of Europe's top universities for wireless communications. Further, you have the opportunity to pursue a doctoral program in wireless communication at Oulu University, provided you meet the necessary requirements at the completion of the double degree at Oulu University. As of now, some students have completed their studies and returned to Sri Lanka, while others are working in Europe, and some have gone on to doctoral programs at Oulu University.*

*The Double Degree M.Sc. Eng. specializing in Wireless Communications is a two-year program. Students selected for the program will start their studies at Peradeniya University for the first year, and upon successful completion, they will move on to Oulu University for the remaining year. Scholarships for study at Oulu University are available to students based on their performance.*

A candidate must fulfill the admission requirements of M.Sc. Eng. of the regular M.Sc. Program of the Department of Electrical and Electronic Engineering, University of Peradeniya. During the first year of the program, a student must complete ten (10) courses of thirty (30) credits (30 credits at the University of Peradeniya is equal to 60 ECTS credits at the University of Oulu). The list of courses is given in the next section of the handbook.

The second year of the program will be conducted at the University of Oulu, Finland. A minimum of fifteen (15) credits (30 ECTS credits) should be obtained from the University of Oulu from the Courses listed below.

- |  |   |
|--|---|
| ✓ Radio Engineering II (5 ECTS)  | ✓ Biosignal Processing I (5 ECTS)                 |
| ✓ Antennas (5 ECTS)  | ✓ Digital Video Processing (5 ECTS)               |
| ✓ Radio Channels (5 ECTS)  | ✓ Human-Computer Interaction (5 ECTS)             |
| ✓ Modern Topics in telecommunications and Radio Engineering (3-7 ECTS) | ✓ Signal Processing Systems (5 ECTS)              |
| ✓ RF Components and Measurements (5 ECTS)                              | ✓ Ubiquitous Computing Fundamentals (5 ECTS)      |
| ✓ Electronics Design II (5 ECTS)                                       | ✓ Application Specific Signal Processors (5 ECTS) |
| ✓ Electronics Design III (6 ECTS)                                      | ✓ Computer Graphics (7 ECTS)                      |
| ✓ Special Course in Electronic Design (4-7 ECTS)                       | ✓ Distributed Systems (5 ECTS)                    |
| ✓ Computer Aided Circuit Design (5 ECTS)                               | ✓ Machine Vision (5 ECTS)                         |
| ✓ Laboratory Exercises on Analogue Electronics (5 ECTS)                | ✓ Mobile and Social Computing (5 ECTS)            |
|  | ✓ Programmable Web project (5 ECTS)               |
|  | ✓ Software Project (7 ECTS)                       |

A Master's thesis of fifteen (15, EE658) credits (equivalent to 30 ECTS credits) must be completed under the supervision of at least one supervisor from each university. Upon the completion of requirements of both the Universities, a student can obtain a Double Degree M.Sc.Eng. specializing in Wireless Communications.

# LIST OF COURSE UNITS

Course No.	Course Title	Electric Power Applications	Controls and Instrumentation	Communications and Information Engineering	Wireless Communication Systems
EE652	Research Methodologies for Electrical and Electronic Engineering	Compulsory for PG.Dip./ Masters/ M.Eng.			NA
EE653	Independent Study in Electrical and Electronic Eng.	Compulsory for PG.Dip			NA
EE654	Advanced Study in Electrical and Electronic Eng.	Compulsory for Masters/ M.Eng			NA
EE658	Postgraduate Research in Electrical and Electronic Eng.				Compulsory
EE659	Postgraduate Research in Electrical and Electronic Eng.	Compulsory for M.Sc.Eng/ M.Sc			
EE660	Advanced Electrical Machines and Drives	◆	█		
EE661	Power System Analysis	◆			
EE662	Distribution Systems Engineering	◆			
EE663	Advanced Digital Communications			◆	◆
EE664	Random Signal Analysis for Communication and Signal Processing		█	◆	□
EE665	Data Networks	█		◆	◆
EE666	Industrial Control Systems		◆		
EE667	Digital Instrumentation	█	◆		
EE668	Pattern Recognition for Smart Systems		◆	█	
EE669	Optimization of Communication Systems				◆
EE670	Power Electronics	□	█		
EE671	Smart Substations and Smart Grid	□		█	
EE672	Renewable Energy and Alternative Energy Sources	□			
EE673	Distributed Generation	□			
EE674	Modern Power Systems	□			
EE675	High Voltage Technology	□			
EE676	Industrial Electrical Systems	□			
EE677	Industrial Electronics and Systems	□	█	█	
EE680	Wireless Communication Systems	█		□	◆
EE681	Microwave Communications			□	◆
EE682	Optical Communication systems			□	□
EE683	Advanced Technologies in Telecommunications			□	□
EE684	Telecommunication Regulation, Policy, and Management			□	□
EE685	Antenna Theory and Design			□	□
EE686	Advanced Digital Signal Processing	█	█	□	◆
EE688	Digital Image and Video Processing		█	□	□
EE689	Internetworking			□	◆

◆ Core course units                      □ Elective course units related to the stream  
 █ Electives course units from the other streams

List of courses cont.

Course No.	Course Title	Electric Power Applications	Controls and Instrumentation	Communications and Information Engineering	Wireless Communication Systems
EE690	Artificial Intelligence for Smart System		<input type="checkbox"/>		
EE691	Advanced Embedded Systems Design	█	<input type="checkbox"/>	█	
EE692	Advanced Computer Architecture		<input type="checkbox"/>	█	
EE693	Biomedical Instrumentation		<input type="checkbox"/>		
EE694	Model Predictive Control Systems	█	<input type="checkbox"/>		
EE695	Computer Vision		<input type="checkbox"/>	█	
EE696	Industrial Automation		<input type="checkbox"/>		
EE697	Industrial Robotics		<input type="checkbox"/>		
EE698	Nonlinear Dynamics and Control		<input type="checkbox"/>		

- ◆ Core course units                      □ Elective course units related to the stream.
- █ Electives course units from the other streams.

# COURSE CONTENT

## **EE652 Research Methodologies for Electrical and Electronic Engineering (1 credit)**

Purpose and Philosophy of Research, The Scientific Method and Research Planning, The Research Problem and Literature Review, Hypothesis Formulation and Designing Experiments, Analyzing Quantitative and Qualitative Data, Effective Use of Graphs, Tables, and Illustrations, Writing a short report or a model research article. *(Lectures +Tutorials- 11 hrs. and Practicals + Assignments- 08 hrs.)*

## **EE653 Independent Study in Electrical and Electronic Engineering (3 credits)**

An independent study, guided by a supervisor, leading up to a report and a presentation after a self-learning of an advanced topic or a mini project. *(Assignments- 90 hrs.)*

## **EE654 Advanced Study in Electrical and Electronic Engineering (5 credits)**

An independent and guided advanced study leading up to a detailed report and a presentation or seminar, after an advanced design or an extensive investigation into the state-of-the-art of a complex engineering problem with some novel simulations or replication of experiments or a mini research project. *(Assignments- 150 hrs.)*

## **EE658 Postgraduate Research in Electrical and Electronic Engineering (15 credits)**

An independent research project in Electrical and Electronic Engineering leading up to a Thesis and Thesis Defense.

## **EE659 Advanced Postgraduate Research in Electrical and Electronic Engineering (30 credits)**

An independent research project in Electrical and Electronic Engineering leading up to a Thesis and Thesis Defense.

## **EE 660 Advanced Electrical Machines and Drives (3 credits)**

Review on Electrical Machines, Power Electronic Converters for Electrical Machine control, Dynamic modeling of induction motor, Principle of vector control, Permanent magnet synchronous and Brushless DC motor drives, Integrated assignment.

*(Lectures + Tutorials- 36 hrs. and Practicals + Assignments- 18 hrs.)*

## **EE 661 Power System Analysis (3 credits)**

Power system Modelling, Load flow techniques and application of commercial software, Fault analysis, Stability analysis, Integrated assignment.

*(Lectures + Tutorials- 33 hrs. and Practicals + Assignments- 24 hrs.)*

## **EE 662 Distribution Systems Engineering (3 credits)**

Introduction, Distribution Management Systems, Distribution lines, Substations, Distribution Automation Equipment, Power quality, Integrated Assignment.

*(Lectures + Tutorials- 38 hrs. and Practicals + Assignments- 14 hrs.)*

**EE 663 Advanced Digital Communications (3 credits)**

Basics of Information Theory, Introduction to Detection Theory, Optimum Receiver, Digital Carrier Modulation, Baseband data transmission, Error Control Coding in Digital Transmission Systems.

*(Lectures + Tutorials- 40 hrs. and Practicals + Assignments- 10 hrs.)*

**EE 664 Random Signal Analysis for Communication and Signal Processing (3 credits)**

Probability Theory, Fundamental Concepts of Random Variables, Multiple Random Variables, Fundamental Concepts and Statistics of Random Signals, Random Signal Models, Transmission of Random Signals Through Systems, Gaussian (Normal) Processes (GPs).

*(Lectures + Tutorials- 39 hrs. and Practicals + Assignments- 12 hrs.)*

**EE 665 Data Networks (3 credits)**

Data Communication Concepts, layered Architecture, Link Protocols, Access protocols, Routing, Flow Control, Delay models in data networks, Advances of Data Networks.

*(Lectures + Tutorials- 39 hrs. and Practicals + Assignments- 12 hrs.)*

**EE 666 Industrial Control Systems (3 credits)**

Classical Control, Discrete Time Control, Multivariable Systems, Optimal Control.

*(Lectures + Tutorials- 39 hrs. and Practicals + Assignments- 12 hrs.)*

**EE 667 Digital Instrumentation (3 credits)**

Fundamental concepts in instrumentation, Sensor fusion, Noise in instruments, Advanced techniques and trends in instrumentation, Smart instruments, Wireless instrumentation.

*(Lectures + Tutorials- 30 hrs. and Practicals + Assignments- 30 hrs.)*

**EE 668 Pattern Recognition for Smart Systems (3 credits)**

Introduction, Bayesian decision procedures, Parameter estimation and supervised learning, Non-parametric techniques, Feature extraction, Dimensionality reduction, Classification by Linear discriminant functions, Neural networks and classification, Unsupervised learning and clustering.

*(Lectures + Tutorials- 42 hrs. and Practicals + Assignments- 6 hrs.)*

**EE 669 Optimization of Communication Systems (3 credits)**

Introduction, Convex Sets, Convex Functions, Convex Optimization Problems, Duality, Applications, Algorithms, Introduction to Convex Optimization Software.

*(Lectures + Tutorials- 39 hrs. and Practicals + Assignments- 12 hrs.)*

**EE 670 Power Electronics (3 credits)**

Introduction, Principle of Operation of Power Electronics Topologies, Analysis Using Switching Functions, Modulation Schemes for Power Converters, Power Converter Modeling and Control, Power Electronics Applications, Integrated Assignment.

*(Lectures + Tutorials- 39 hrs. and Practicals + Assignments- 12 hrs.)*

**EE 671 Smart Substations and Smart Grid (3 credits)**

Introduction to Smart Grid, Communication Technologies for the Smart Grid, Information Security for the Smart Grid, Smart substation equipment and applications, Substation automation and IEC 61850, Phasor measurement units, Smart Metering and Demand-Side Integration, Integrated Assignment.

*(Lectures + Tutorials- 38 hrs. and Practicals + Assignments- 14 hrs.)*

**EE 672 Renewable Energy and Alternative Energy Sources (3 credits)**

Introduction, Photovoltaic systems, Wind power systems, Micro Hydropower systems, Other renewable energy sources, Alternative energy sources, Challenges related to renewable energy sources, Energy storage methods, Integrated assignment.

*(Lectures + Tutorials- 36 hrs. and Practicals + Assignments- 18 hrs.)*

**EE 673 Distributed Generation (3 credits)**

Distributed generation (DG) overview, Distribution system components, DG and future network architectures, Steady state performance and Control, Faults and protection, Power quality issues, Standards related to DGs, and Integrated assignment.

*(Lectures + Tutorials- 36 hrs. and Practicals + Assignments- 18 hrs.)*

**EE 674 Modern Power Systems (3 credits)**

Control of active power and frequency, Control of voltage and Reactive power, Power electronics converters in modern power systems, Flexible AC Transmission systems (FACTS), High Voltage Direct Current (HVDC) systems, Interconnection of large wind farms, DC Grids, Integrated assignment.

*(Lectures + Tutorials- 36 hrs. and Practicals + Assignments- 18 hrs.)*

**EE 675 High Voltage Technology (3 credits)**

High voltage generation and measurements, Electric field Control, Insulation systems, Insulation Coordination, High Voltage Testing, DC insulation.

*(Lectures + Tutorials- 39 hrs. and Practicals + Assignments- 12 hrs.)*

**EE 676 Industrial Electrical Systems (3 credits)**

Industrial wiring, Lightning, and surge protection, Earthing of electrical installations, Lighting, Demand side management, Electrical machine selection and protection, Integrated assignment.

*(Lectures + Tutorials- 36 hrs. and Practicals + Assignments- 18 hrs.)*

**EE 677 Industrial Electronics and Systems (3 credits)**

Introduction, Power factor, harmonics, power quality and corrective schemes, EMI and EMC, Introduction to control of loads and sizing of transformers and generators, Motor control centers (MCC), Networking of Industrial Systems, Introduction to AI applications in industrial systems, Integrated assignment.

*(Lectures + Tutorials- 39 hrs. and Practicals + Assignments- 12 hrs.)*

**EE 680 Wireless Communication Systems (3 credits)**

Wireless channel characterization, Mobile network design principles, Diversity Techniques, Error Correction and Detection Techniques, 3G, 4G, and beyond cellular wireless networks.

*(Lectures + Tutorials- 40 hrs. and Practicals + Assignments- 10 hrs.)*

**EE 681 Microwave Communication (3 credits)**

Introduction, Two port parameters, Microwave network analysis, Planar transmission lines, CAD simulation of microwave circuits, Filter design, Coupler design, Power dividers, Microwave resonator, Microwave amplifiers, Microwave oscillators, Microwave mixers.

*(Lectures + Tutorials- 37 hrs. and Practicals + Assignments- 16 hrs.)*

**EE 682 Optical Communication systems (3 credits)**

Optical Fibers, Devices in optical transmission systems, Lightwave transmission systems, Multichannel systems, Optical Network Elements, Optical access network architectures.

*(Lectures + Tutorials- 396 hrs. and Practicals + Assignments- 18 hrs.)*

**EE 683 Advanced Technologies in Telecommunications (3 credits)**

Mobile Communication Systems, Structures of Modern Mobile Communication Systems, Broadband Wireless Systems, Future Mobile Communication Systems, Technologies for Ubiquitous Personal Communications.

*(Lectures + Tutorials- 36 hrs. and Practicals + Assignments- 18 hrs.)*

**EE 684 Telecommunication Policy, Regulation, and Management (3 credits)**

Introduction to Telecommunication Industry, Telecommunication Reforms, Formation of telecommunication policy, Wireless and spectrum management, Telecommunication Law, Telecommunication Regulations.

*(Lectures + Tutorials- 36 hrs. and Practicals + Assignments- 18 hrs.)*

**EE 685 Antenna Theory and Design (3 credits)**

Revision of Antenna Fundamentals, Wire antennas, Aperture and Microstrip Antennas, and Matching Techniques.

*(Lectures + Tutorials- 42 hrs. and Practicals + Assignments- 6 hrs.)*

**EE 686 Advanced Digital Signal Processing (3 credits)**

Signals and systems, Time Domain Analysis of Discrete Time Signals and Systems, The z-Transformation and its Applications, Frequency Domain Analysis of Signals and Systems, Stochastic Signals and Systems, Wiener Filter, Topics in Advanced Signal Processing.

*(Lectures + Tutorials- 42 hrs. and Practicals + Assignments- 6 hrs.)*

**EE 688 Digital Image and Video Processing (3 credits)**

Image Fundamentals, Image transforms, Image Enhancement, Image Restoration, Image Compression, Image Segmentation, Video processing, Advancements in Image and video processing, Design project.

*(Lectures + Tutorials- 41 hrs. and Practicals + Assignments- 8 hrs.)*

**EE 689 Internetworking (3 credits)**

Networking Concepts, Internet Communication Protocols, Naming, Addressing, Routing, Network monitoring and management, network control, network security, adaptive networks, and Emerging Technologies.

*(Lectures + Tutorials - 37 hrs. and Practicals + Assignments- 16 hrs.)*

**EE 690 Artificial Intelligence for Smart System (3 credits)**

Problem-solving by search techniques, Knowledge representation and reasoning, Modelling uncertainty, Machine Learning, and Smart system design mini projects.

*(Lectures + Tutorials- 30 hrs. and Practicals + Assignments- 30 hrs.)*

**EE 691 Advanced Embedded Systems Design (3 credits)**

Introduction to Embedded Systems, Standard Single Purpose Processors, Hardware development of embedded microcontroller systems, Embedded System Modelling - State Machine and Concurrent Process Models, Designing Embedded Systems with Software (General Purpose Processors), Programming Embedded Systems, Designing Embedded Systems with Hardware (Custom Single-purpose Processors), Operating Systems for Embedded Systems, System on a Chip (SoC), Current Trends.

*(Lectures + Tutorials- 31 hrs. and Practicals + Assignments- 28 hrs.)*

**EE 692 Advanced Computer Architecture (3 credits)**

Computer Abstractions and Technology, Instructions as the Language of Computers, Arithmetic for Computers, Processor Design, Memory Hierarchy and Its Design, Exploiting Instruction Level Parallelism, Data Level Parallelism, Thread-Level Parallelism, Hardware Description Languages and Simulation and Synthesis, Computer Architecture and Dependability, Current Trends.

*(Lectures + Tutorials- 32 hrs. and Practicals + Assignments- 26 hrs.)*

**EE 693 Biomedical Instrumentation (3 credits)**

Measurement Systems, Biomedical Sensors and principles, Origin of Biopotentials, Biopotential Electrodes, Biopotential Amplifiers, Biomedical Instrumentation Case Studies, Electrical Safety, Medical Device Design and regulation, Biomedical Signal and Image Processing, Recent Developments in the Field.

*(Lectures + Tutorials- 42 hrs. and Practicals + Assignments- 6 hrs.)*

**EE 694 Model Predictive Control Systems (3 credits)**

Discrete-time MPC, Discrete-time MPC with Constraints, Discrete-time MPC with Prescribed Degree of Stability, Continuous-time MPC, Continuous-time MPC with Constraints, Continuous-time MPC with Prescribed Degree of Stability, Implementation of Predictive Control Systems.

*(Lectures + Tutorials- 35 hrs. and Practicals + Assignments- 20 hrs.)*

**EE 695 Computer Vision (3 credits)**

Introduction, Characterization of Distortions and principle of point/line duality, 3-D World, Visual perception and edge detection, Extraction of Interest points and their descriptors in image pairs and establishing point-to-point correspondence between images, Estimation of Homographies, Modeling the camera.

*(Lectures + Tutorials- 37 hrs. and Practicals + Assignments- 16 hrs.)*

**EE 696 Industrial Automation (3 credits)**

Introduction to automation, Signals, Process control, Special control structures, Sequence control, Control of machine tools, Hydraulic actuator systems, Pneumatic control systems, Electric Drives, and Networking of Sensors, Actuators and Controllers.

*(Lectures + Tutorials- 41 hrs. and Practicals + Assignments- 8 hrs.)*

**EE 697 Industrial Robotics (3 credits)**

Introduction to Industrial Robot Systems, Forward and Inverse Kinematics, Velocity Kinematics, Path and Trajectory Planning, Independent Joint Control.

*(Lectures + Tutorials- 39 hrs. and Practicals + Assignments- 12 hrs.)*

**EE 698 Nonlinear Dynamics and Control (3 credits)**

Introduction, Phase plane analysis of Non-linear systems, Fundamentals of Lyapunov Theory, Non-Autonomous systems, Feedback Linearization based Control design, Other type of Nonlinear Control.

*(Lectures + Tutorials- 39 hrs. and Practicals + Assignments- 12 hrs.)*

# FINANCE

## COURSE FEE

<u>Program of Study</u>	<u>Fee (Rs.)</u>
Postgraduate Diploma	300,000/=
M.Eng./ Masters/ M.Sc.Eng./ M.Sc.	375,000/=

Under special circumstances, a limited number of candidates could be considered for being allowed to pay the course fee in not more than three installments on request. In addition to the course fee, university stipulated fees must be paid at the beginning of the program as given below.

<u>Description</u>	<u>Fee (Rs.)</u>
Annual registration fee	2000.00
Student library fee	1500.00
Lending library fee	2000.00
ID card	200.00

## POSTGRADUATE FUNDING

The Department of Electrical and Electronic Engineering together with several organizations offers significant funding for postgraduate research degrees. The funding categories are as below:

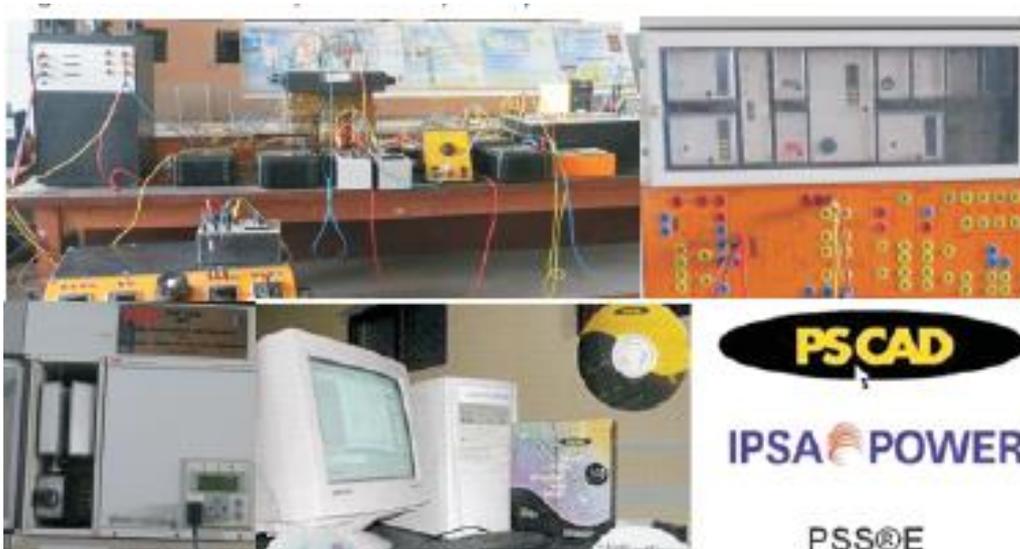
1. Industrial funding is available for full-time students. Here the students are expected to do full-time research work on a topic related to the industry, which funds the project.
2. University research grants are available for both Sri Lankan and international students who can do considerable work on University research projects while following the postgraduate program. Here the students are advised to select supervisors from the department staff team and fill out the University research grant application in advance <http://www.pdn.ac.lk/mainpg-contents/download-files/reserach-grant-appplication.doc>

3. National Science Foundation (NSF) research grants are available for students who can do considerable work on the NSF research projects while following the postgraduate program. Here the students are advised to select supervisors from the Department' and other Universities' or Faculties' staff and fill the NSF research grant application in advance. Further details can be found at <http://www.nsf.ac.lk/>.
4. The National Research Council (NRC) also provides research grants to students who are working with NSF research projects while following the postgraduate program. Here the students are advised to select supervisors from the Department' and other Universities' or Faculties' staff and fill the NRC research grant application in advance. Further details can be found at <http://www.nrc.gov.lk/>.

# RESOURCES

## POWER AND ENERGY LABORATORY

The Department of Electrical and Electronic Engineering has a state-of-the-art power system laboratory that is extensively used for undergraduate and postgraduate teaching and research. Several hardware setups that can be used to mimic generation, transmission, and distribution systems and their control are available in the laboratory. The lab is also equipped with commercial software such as PSCAD/EMTDC, PSS/E, and IPSA. In addition to facilities available in this lab to analyze and demonstrate electrical power systems, we are developing a Smart Grid Lab to give insight into the latest developments in the power system.



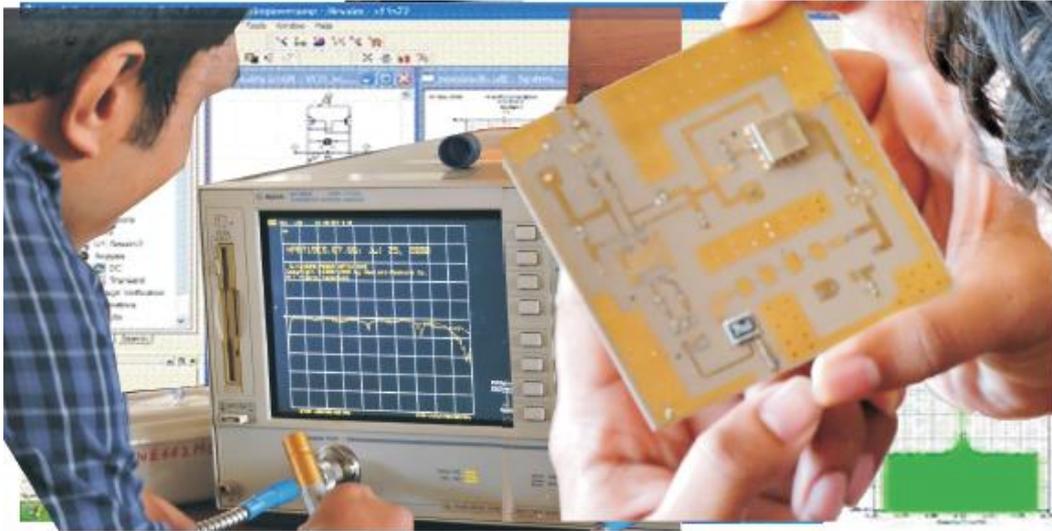
## ELECTRICAL MACHINES AND DRIVES LABORATORY

In this laboratory, setups such as 'dSPACE' based Machines Drive Control, dc and ac motors with coupled generators to study performances, Inverter based motor drives, and Pump performance illustration with inverter-based drive are available. These are used for laboratory experiments for undergraduate and postgraduate modules and projects.



### RF AND MICROWAVE LABORATORY

This lab is constantly improving its resources to support cutting-edge research and to offer high-quality courses, both at undergraduate and postgraduate levels. Students are given not only a sound theoretical knowledge but also a solid practical experience in microwave technology. The laboratory is equipped with state-of-the-art design tools such as AWR Microwave Office, Ansoft HFSS/Designer, network analyzers, spectrum analyzers, power meters, etc.



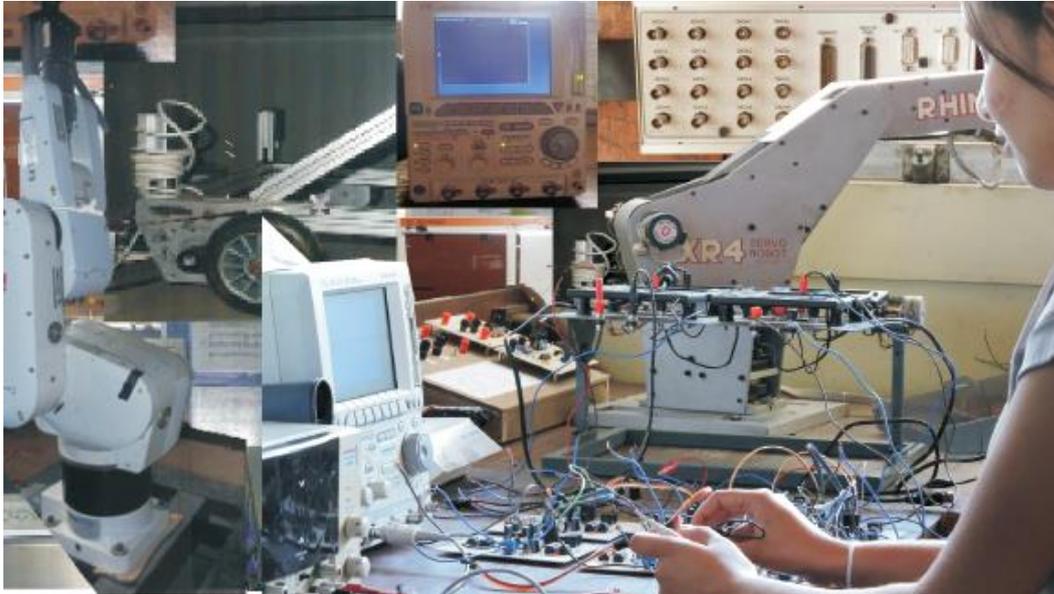
### COMMUNICATION AND INFORMATION LABORATORY

This laboratory aims to enhance the telecommunication, wireless communication, mobile communication, digital communication, and data communication-related skills of undergraduate and postgraduate students. The lab is equipped with state-of-the-art equipment and facilities to provide hands-on experience for the future telecommunication engineer.



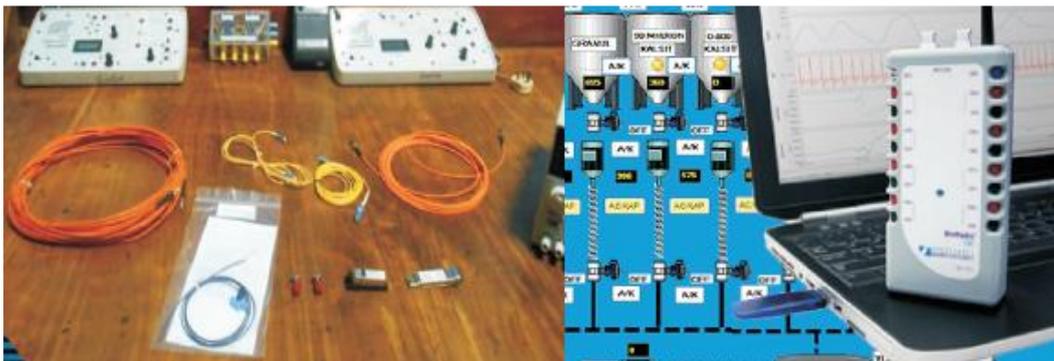
## CONTROL AND AUTOMATION LABORATORY

The Controls, Automation, and Robotics laboratory guides and conducts practical experiments for undergraduate and graduate students following courses in this area. The lab is equipped with laboratory setups and tools specially tailored to deliver the fundamentals as well as advanced concepts effectively and efficiently in analog and digital control of electrical and electromechanical systems, modern control systems including real-time and distributed systems, industrial automation systems, industrial control systems, and mobile robotics.



## MULTIDISCIPLINARY LABORATORY

The multi-disciplinary laboratories mainly cater to emerging areas of electrical and electronic engineering. Some of these areas include smart grids, optical fiber, and Bio-medical engineering. Smart Grid lab covers research areas such as renewable energy and their integration, Microgrids, Smart metering, DC grids, Intelligent energy management algorithms, Demand response, etc. The optical communication lab focuses on improving the efficiency of optical fiber transmission. Biomedical lab carries PC-based medical instrumentation, Electrical Impedance Computed Tomography, Medical image processing, Electrophysiologic measurement instruments, etc.



### HIGH VOLTAGE LABORATORY

The high-voltage laboratory is well-equipped with modern test facilities purchased from foreign and local funding programs. These test facilities are now vitally used for undergraduate and post-graduate research activities, laboratory experiments, consultancy services for industry, such as Ceylon Electricity Board, Lanka Transformers PLC, and for demonstrations to regular visitors such as school children and navy officers.



### ELECTRONICS AND INSTRUMENTATION LABORATORY

The Electronic and Instrumentation laboratory of DEEE focuses on analog electronics to digital logic designs and instrumentation. State-of-the-art laboratory test equipment includes analog and digital oscilloscopes, logic analyzers, programmable function generators, isolated-tracking-adjustable-dual power supplies, FPGA development kits, multichannel analog and digital DAQ cards, industrial embedded computers, logic design demo boards, microprocessor and microcontroller development kits, and many other equipment.



## COMPUTING RESOURCES

The Department maintains its autonomous computer network while still being a part of the main University network. At the center of this network are the three servers, each dedicated to a unique purpose: mail, web, and file services. Postgraduate students are provided with a mini network of their own, equipped with a file server and specialized software within the Department network. Software ranging from simple demonstration tools to advanced simulation tools in various areas of Electrical Engineering are available for the Department members. The wireless link within the Department provides constant connectivity to many roaming users with laptops and for places where wired network access does not exist.

Students are provided with separate computing facilities dedicated to the project and research works. This facility allows them to use some of the advanced simulation tools for their work.

In addition, the computer center provides the necessary computing facilities on the weekdays as well as weekends. Therefore, postgraduate students could use the computing facilities provided by the computer center. It can accommodate more than 70 students at a time.

## TEACHING PANEL

	<p><b>Prof. Abeyaratne S.G.</b>, B.Sc.Eng.(Peradeniya), M.Eng. (Gifu), Ph.D. (Gifu), C.Eng, MIESL, SMIEEE</p>
	<p><b>Research Interests:</b> Power Electronic Topologies, Electrical Machines and their control, Industrial Applications, Renewable energy conversion, Grid-Edge energy integration</p>
	<p><b>Dr. Abeygunasekara W. L.</b>, B.Sc.Eng.(Peradeniya), M.Sc. (Purdue), Ph.D. (Peradeniya), AMIESL, MIEEE</p>
	<p><b>Research Interests:</b> Organic solar cells, Carbon nanostructures, Nano characterization, Scanning Probe Microscopy, Atomic Force, Modeling and simulation of solar cells</p>
	<p><b>Dr. Binduhewa P.J.</b>, B.Sc.Eng.(Peradeniya), Ph.D. (Manchester), MIEEE</p>
	<p><b>Research interests:</b> Micro Grids, Power electronics for Renewable energy, Controllers for Power Electronic applications, Development of power electronic based Educational tools, Electric vehicles</p>
	<p><b>Dr. Dasanayake D.M.I.S.I.</b>, B.Sc.Eng.(Peradeniya), M.Sc. (Washington), Ph.D. (Washington), MIEEE</p>
	<p><b>Research Interests:</b> Computational Neuroscience, VLSI Design, Optimal Control Theory, Optimization</p>
	<p><b>Prof. Dissanayaka M.B.</b>, B.Sc.Eng.(Peradeniya), Ph.D. (Surrey,UK), MIEEE, AMIE(SL)</p>
	<p><b>Research Interests:</b> Image/Video Processing and Transmission, Error resilience in video communication, Medical Image Analysis, Deep and Machine learning Applications, Molecular Communication</p>
	<p><b>Prof. Ekanayake J.B.</b>, B.Sc. Eng. (Peradeniya), Ph.D. (UMIST), SMIEEE, FIET, CEng, MIESL</p>
	<p><b>Research Interests:</b> Power Electronic Applications, Renewable Energy Generation, and its integration (especially wind and PV), Smart Grids, Signal Processing, AI/ML applications for Smart Grid</p>
	<p><b>Prof. Ekanayake M.P.B.</b>, B.Sc. Eng. (Peradeniya), Ph.D. (USA)</p>
	<p><b>Research Interests:</b> Medical Image Analysis, Computational Neuroscience, Biomedical signal processing, Dynamic Systems and Control Theory, Vision and Imaging, Remote sensing, AI Applications</p>
	<p><b>Prof. Fernando M.A.R.M.</b>, B.Sc.Eng.(Peradeniya), Tech.Lic. (KTH), Ph.D. (Chalmers), CEng, Int PE, FIE SL, SMIEEE</p>
	<p><b>Research Interests:</b> Condition Monitoring, Diagnostics of power transformers and generators using dielectric spectroscopy, Lightning Protection, Power System Analysis</p>

	<p><b>Prof. Godaliyadda G.M.R.I.</b>, B.Sc.Eng.(Peradeniya), Ph.D. (NUS)</p>
	<p><b>Research Interests:</b> Spectral Imaging, Remote Sensing, AI for Epidemiology, Biomedical Signal Processing, Optical Wireless Communication, Non-Linear Dynamics and Control, Computer Vision, Signal, and Image Processing</p>
	<p><b>Prof. Gunawardena A.U.A.W.</b>, B.Sc.Eng.(Peradeniya), M.Eng.Sc. (UNSW), Ph.D. (UQ)</p>
	<p><b>Research Interests:</b> Microwave Circuit and System Designs, Radar systems and Antenna design, Signal, and Image Processing with Radar Applications.</p>
	<p><b>Dr. Harischandra W. A. N. I.</b>, B.Sc.Eng. (Peradeniya), Tech. Lic. (KTH), Ph.D. (KTH), MIEEE</p>
	<p><b>Research Interests:</b> Bio-robotics, Bio-medical engineering and Computational Neuroscience, Biomechanics, Active Sensing and Sensor Networks, ML Applications, Computer Vision, Signal and Image Processing, System Identification</p>
	<p><b>Prof. Herath H.M.V.R.</b>, B.Sc.Eng.(Peradeniya), M.S.(Miami), Ph.D. (Paderborn), SMIEEE, MIESL, CEng</p>
	<p><b>Research Interests:</b> Coherent optical transmission, Analog Integrated Circuit Design, Computational Epidemiology, Hyper and Multispectral Imaging Applications, AI Applications</p>
	<p><b>Dr. Jagath-Kumara K.D.R.</b>, B.Sc.Eng.(Peradeniya), M.Eng.Sc.(UNSW), Ph.D. (USA), MIESL,</p>
	<p><b>Research Interests:</b> Wave energy utilization, Network protocols and algorithms, Statistical Signal processing, Digital Radio Links, RF and Sound Energy</p>
	<p><b>Prof. Liyanage K.M.</b>, B.Sc.Eng. (Peradeniya), Dr. Eng(U-Tokyo), MIESL, SMIEEE, CEng</p>
	<p><b>Research interests:</b> Communication Networks, Cyber Physical Security, Energy, Environment and Smart Grids- ICT Applications</p>
	<p><b>Dr. Navaratne U.S.</b>, B.Sc.Eng. (Peradeniya), M.Sc. (Purdue), Ph.D. (Purdue), AMIESL, SMIEEE, CEng</p>
	<p><b>Research interests:</b> Cognitive sensor networks, Instrumentation control and Computer interfacing, Smart Grids, Renewable Energy Integration and Control, Agent Based Modeling in Power Systems and Smart Grids</p>
	<p><b>Dr. Ratnayake K.B.N.</b>, B.Sc.Eng. (Peradeniya), M.Sc. (Rensselaer), Ph.D. (Rensselaer), MIEEE,</p>
	<p><b>Research interests:</b> Voice over IP – Protocols and signaling, Speech recognition and synthesis, Linux embedded systems, Digital audio restoration, Computer music</p>

	<p><b>Dr. Ratnayake K.R.M.N.</b>, B.Sc.Eng. (Peradeniya), M.Sc. (Gifu), Ph.D. (Gifu), MIESL, MIEE, CEng</p>
	<p><b>Research interests:</b> Analog and Mixed Signal Integrated Circuits, Power Electronics, Multilevel Inverters and Control, SRM Motor Drives and Control, PV Applications</p>
	<p><b>Dr. Ranaweera R.D.</b>, B.Sc.Eng.(Peradeniya), M.S.B.m.E (Purdue), Ph.D. (Purdue), MIEEE</p>
	<p><b>Research Interests:</b> Biomedical Instrumentation, Biomedical Signal Processing, Medical Imaging Systems, Human-machine interfacing, PC-based instrumentation</p>
	<p><b>Prof. Samaranayake B.G.L.T.</b>, B.Sc.Eng.(Peradeniya), Tech.Lic. (KTH), Ph.D. (KTH), <i>SMIEEE</i></p>
	<p><b>Research Interests:</b> Control Systems, Robotics and Automation, Electric Vehicle Powertrains, Electrical Machine Diagnostics, Prognostics and control, Nanoscale Photovoltaics, HVDC Systems, Distributed Control Systems</p>
	<p><b>Dr. Suraweera S.A.H.A.</b>, B.Sc.Eng.(Peradeniya), Ph.D. (Monash), MIEEE</p>
	<p><b>Research Interests:</b> Wireless communications, Green communications, Full-duplex transmission, Wireless interference management, Cognitive radio, Wireless security, Multi-antenna communication systems</p>
	<p><b>Prof. Uduwala D.N.</b>, B.Sc.Eng.(Peradeniya), Tech.Lic. (KTH), Ph.D. (KTH), SMIEEE, CEng, MIESL</p>
	<p><b>Research interests:</b> Broadband antenna design, Antennas above matter, Design of antennas for ground penetrating radar, Use of genetic algorithms to optimize antenna, Microstrip antennas, Computational Electromagnetism</p>
	<p><b>Dr. Weerakoon W.M.M.T.S.</b>, B.Sc.Eng.(Peradeniya), M.Sc. (Kyutech), Ph.D. (Kyutech), MIEEE</p>
	<p><b>Research interests:</b> Robot localization, path planning, and control; Underwater robotics; Field Robotics; Artificial Intelligence for robotics; Machine learning; Mechatronic system design; and Robust and adaptive control systems.</p>
	<p><b>Dr. Wijayakulasooriya J.V.</b>, B.Sc. Eng (Peradeniya), Ph.D. (N'bria), MIEEE.</p>
	<p><b>Research Interests:</b> Artificial intelligence, Sensor fusion, Pattern Recognition and Machine Intelligence, Computer vision, Biomedical Signal and Image Processing, Wireless Sensor Networks, Fuzzy Control, Adaptive Noise Cancellation</p>

# VISITING LECTURERS

	<p><b>Prof. Ekanayake E.M.N.</b>, B.Sc.Eng. (Ceylon), M.Sc.Eng. (London), Ph.D. (McMaster), MIEEE. (<i>Emeritus Professor, Department of Electrical and Electronic Engineering</i>)</p>
	<p><b>Dr. Elkaduwe D.</b>, B.Sc. Eng. (Peradeniya), Ph.D. (UNSW), (<i>Department of Computer Engineering, University of Peradeniya</i>)</p>
	<p><b>Dr. Kumara J.R.S.S.</b>, B.Sc.Eng. (Peradeniya), M.Phil. (Peradeniya), Tech. Lic. (Chalmers), Ph.D. (Chalmers), MIEEE, AMIESL (<i>NKT-AB Sweden</i>)</p>
	<p><b>Dr. Nawinne I. B.</b>, B.Sc. Eng. (Peradeniya), Ph.D. (UNSW) (<i>Department of Computer Engineering, University of Peradeniya</i>)</p>
	<p><b>Dr. Radhakrishnan S</b>, B.Tech (IT-BHU), Ph.D. (UNSW) (<i>Department of Computer Engineering, University of Peradeniya</i>)</p>
	<p><b>Prof. Ragel R.G.</b>, B.Sc.Eng.(Peradeniya), Ph.D. (UNSW), MIET, MIEEE (<i>Department of Computer Engineering, University of Peradeniya</i>)</p>
	<p><b>Dr. Senadeera P.M.</b>, B.Sc.Physics (Peradeniya), B.Sc. Computer Science (Ohio), MSEE (Ohio), Ph.D. (North Carolina), MIEEE (<i>Department of Electronics, Wayamba University of Sri Lanka</i>)</p>
	<p><b>Research Interests:</b> RF and Microwave systems – System, circuit and sub-circuit designs, Mixed signal VLSI design, Analog IC design, Digital Electronics design</p>

	<p><b>Dr. H.M. Wijekoon</b>, B.Sc.Eng.(Pera), M.Eng.(Thailand), Ph.D. (Singapore), C.Eng, MIEE (<i>Ceylon Electricity Board</i>)</p>
	<p><b>Research Interests:</b> Power system stability, renewable integration, power quality-related studies, distribution system improvement studies</p>
	<p><b>Dr. C. K. Walgampaya</b>, B.Sc. Eng. (Peradeniya), MSc (Louisville), PhD (Louisville) (<i>Department of Engineering Mathematics, University of Peradeniya</i>)</p>
	<p><b>Research Interests:</b> Web Mining, Machine learning, and Operations Research</p>
	<p><b>Prof. (Ms.) D. S. K. Karunasinghe</b>, B.Sc. Eng. (Peradeniya), PhD (NUS Singapore) (<i>Department of Engineering Mathematics, University of Peradeniya</i>)</p>
	<p><b>Research interests:</b> Soft-computing methods (ANN, SVM, Evolutionary Computation) applied in engineering problems, Numerical modeling, Time series analysis.</p>
	<p><b>Dr. P. Chathuranga Weeraddana</b>, B.Sc. Eng. (Moratuwa), M. Eng. (AIT, Thailand), Ph.D (Oulu, Finland) (<i>Department of Electronic and Telecommunication Engineering, University of Moratuwa</i>)</p>
	<p><b>Research Interests:</b> Application of optimization techniques in various application domains, such as signal processing, wireless communications, and smart grids.</p>
	<p><b>Dr. Prathapasinghe Dharmawansa</b>, B.Sc. Eng. (Moratuwa) and M.Sc. Eng. (Moratuwa) and D. Eng. (AIT, Thailand) (<i>Department of Electronic and Telecommunication Engineering, University of Moratuwa</i>)</p>
	<p><b>Research Interests:</b> Communication theory, Statistical signal processing, Random matrices, Space-time processing and MIMO system, Wireless communications, Multivariate analysis</p>
	<p><b>Eng. Rajiv Weragama</b>, B.Sc. Eng. (Peradeniya) and M.Sc. Eng. (Peradeniya) (<i>Sri Lanka Telecom</i>)</p>
	<p><b>Research Interests:</b> Internet of Things, Optical and Wireless Communication Networks, Broadband TV, Service Management, and Improvements</p>

# SUCCESSFUL GRADUATES AND CURRENT STUDENTS

Following successful graduates from our postgraduate program and some of the current students representing different courses of study and with different backgrounds are sharing their opinions and experiences with us.



*This MSc program has incalculably supported me to boost my knowledge mainly on Power System Engineering, which directly helped me to sort out real-world problems as a Power System Planner. The courses have been designed with up-to-date information which is delivered practically. I would most recommend following this MSc program for anyone seeking to enhance their knowledge and research experience.*

**Mr. Gayan Abeynayake, Transmission Planning Engineer, Ceylon Electricity Board**



*This postgraduate program has inspired me during industrial involvements. Further, the Department of Electrical and Electronic Engineering possesses an excellent research facility guided by helpful and dedicated academic staff. It was a privilege to study in the most pleasant natural environment in Sri Lanka.*

**Ms. Purnima Jayawardhana, Electrical Engineer, Sri Lanka Railways**



*This program is a strong bridge between my academic and professional life, it always makes me understand the real professional problems with a view of correct Engineering approach. Hence it helps to make my career a success.*

**Mr. Tharaka Ratnayake, Electrical Engineer, Ceylon Electricity Board**



*The flexibility of the MSc program enabled me to focus on my area of interest. Further, the exploratory work carried out under the guidance of supervisors for my thesis allowed me to be more innovative in my day-to-day work as a senior telecommunication engineer.*

**Mr. Rajiv Weragama, Engineer, Sri Lanka Telecom**



*This M.Sc program is a better way of filling the gaps between the theories that we learn and the real engineering applications. The friendly, flexible, and skilled set of lecturers adds more colors to the program while making it interesting. I highly recommend it to any person who is looking forward either to move with higher studies or to broadening their technical knowledge while achieving his personal and professional commitments.*

**Mr. Tharindu Dhanushka Udagedara, Engineer – Access Network, Etisalat Lanka (pvt) Ltd**

## LOCATION

The University of Peradeniya is situated in Peradeniya which is just a 15-minute drive from the hill capital, Kandy. The university covers about 700 hectares of land located on the flood plain of the Mahaweli River as well as on the lower slopes of the Hantana range.



*Dalada Maligawa; situated at the heart of Kandy city and considered the symbol of cultural heritage of the country.*

*The Peradeniya botanical garden: Has a history of more than a century and the largest in the country. It has a large collection of tropical plants and has a unique signature of its kind in the region. Situated just in front of the university entrance and provides a great opportunity for the students to enjoy the beauty of the nature.*



*Kandy Lake: Being at the centre of the Kandy and having Dalada Maligawa at a side of it Kandy Lake has a spectacular view. It is a remarkable sign of Sri Lankan Architecture.*

*Hantana: Gives the elegant view for the university and the surrounding and provides a great opportunity for explorations for the University students. The University itself is situated in the Hantana Valley.*



## STUDENT LIFE

The University of Peradeniya has its unique place for providing ideal studying conditions as well as opportunities for extra-curricular and recreational activities. Being the most prestigious university in Sri Lanka, the University of Peradeniya provides a lifetime experience for its students during their student life. Faculty of Engineering is not an exception for this.

*The Faculty of Engineering accommodates students from all parts of the Island. Therefore, students get the opportunity to share their cultural and moral values with other students in harmony.*



*The beautiful surrounding of the faculty not only provides great view but also creates a good learning environment for the students.*

*The Engineering Library provides an extensive collection of books and Journal publication for research study in engineering discipline. The longer opening hours enables the students to work freely. In addition, it is opened till late night during the exam period for the benefit of the students.*





*The lush environment with the ideal Kandy climate creates an ideal learning environment, which gives the University of Peradeniya a unique place.*

*Open Air Theater provides the opportunity to the students to show their hidden talents and to improve their aesthetic skills as well, particularly for engineering students.*



*Facilities are provided for the following sports: Athletics, Badminton, Basketball, Cricket, Football, Hockey, Netball, Rugger, Table Tennis, Tennis, Volleyball, Weightlifting, Wrestling, Elle, Chess and Swimming. Sports facilities are also available to the postgraduate students.*



# HOW TO APPLY?

The application form and the template for the referee's report can be downloaded from the following URL:

[https://web2.ee.pdn.ac.lk/PG\\_HowToApply](https://web2.ee.pdn.ac.lk/PG_HowToApply)

The duly filled application together with the requested supporting documents should be sent to the following address:

For the Regular program

**PG Coordinator,  
Postgraduate Program in Electrical and Electronic Engineering,  
Department of Electrical and Electronic Engineering,  
Faculty of Engineering,  
University of Peradeniya,  
Peradeniya 20400.  
Sri Lanka.**

For the Double Degree M.Sc. Eng. in Wireless Communications

**PG Coordinator,  
Double Degree Program in Wireless Communications,  
Department of Electrical and Electronic Engineering,  
Faculty of Engineering,  
University of Peradeniya,  
Peradeniya 20400.  
Sri Lanka.**

**Telephone:** +94 81 2393450 (8:30 a.m. - 4:30 p.m.)

# CONTACT US

## Postal Address

Department of Electrical & Electronic Engineering,  
Faculty of Engineering,  
University of Peradeniya,  
Peradeniya 20400,  
Sri Lanka.

## Office Telephone

PG office: 0094 81 2393450

Coordinator of PG Program in Electrical and Electronic Engineering: 0094 81 2393427

Coordinator of Double Degree Program: 0094 81 2393401

## Office Fax

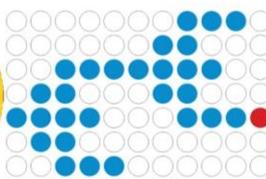
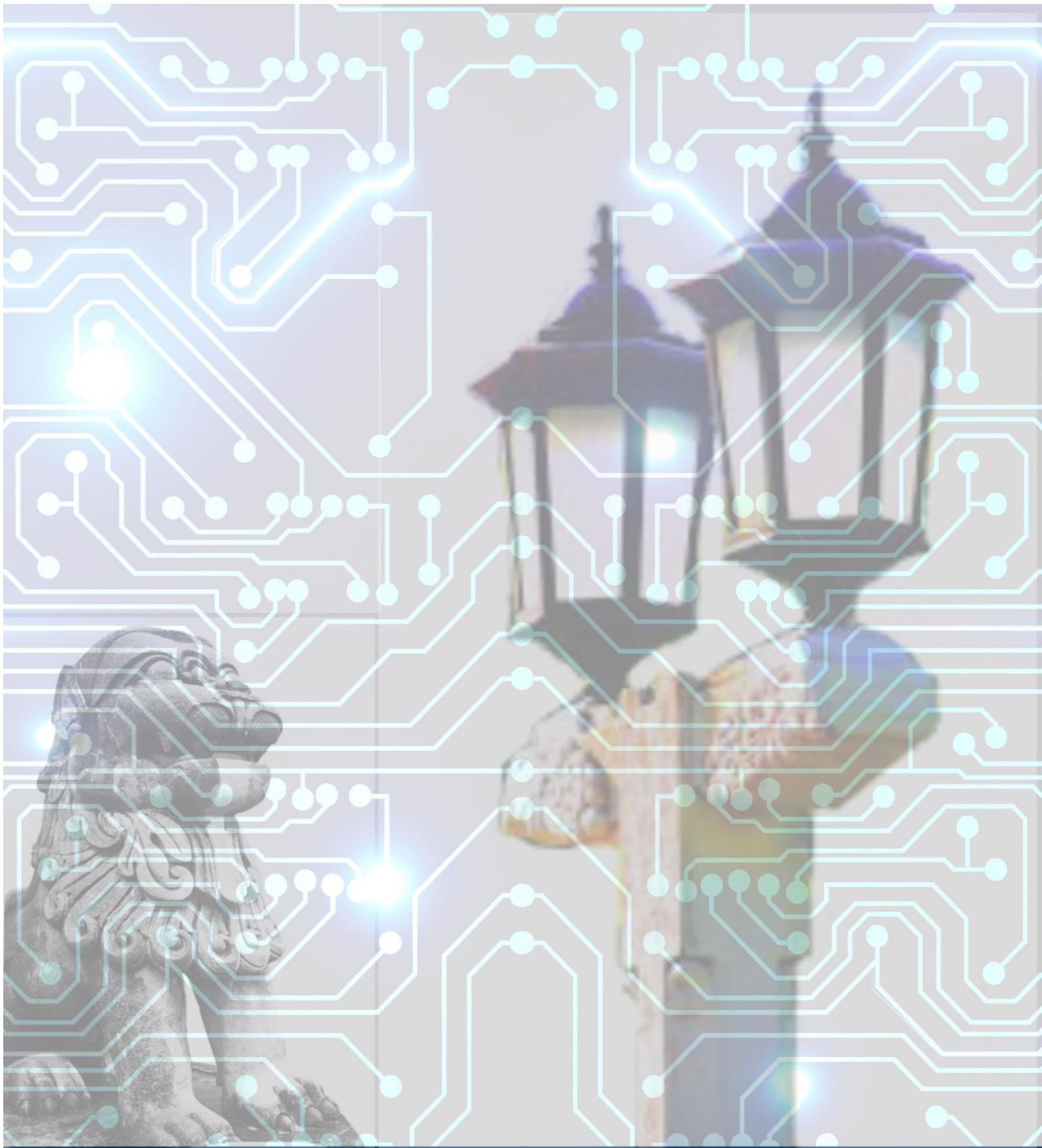
0094 81 2385772

## Important Email Addresses

[pgoffice@ee.pdn.ac.lk](mailto:pgoffice@ee.pdn.ac.lk) – Postgraduate office

[pgcoordinator@ee.pdn.ac.lk](mailto:pgcoordinator@ee.pdn.ac.lk) – Postgraduate Coordinator





Department of Electrical and  
Electronic Engineering  
University of Peradeniya

DEEP VISION, BRIGHT FUTURE