



## Higher Degree Programme in Engineering



## M.E. Microelectronics

### ABOUT BITS, PILANI-DUBAI

BITS, Pilani – Dubai (BPD) is a branch campus of the internationally reputed BITS, Pilani – India. It was set up in September 2000 in Dubai in association with the ETA ASCON Star Group, in response to the growing needs for quality engineering education among the residents of the Middle East.

BITS, Pilani-Dubai attracts a large number of brilliant students from UAE, KSA, Oman, Kuwait, Qatar, Bahrain, India, Tunisia, South Africa, Nigeria, Egypt, Thailand, Indonesia, China and Canada. Some highlights in the growth of BPD since its inception in 2000 are given below:

- **Student strength:** Currently 1700 students on rolls with about 30% of the total strength being girls as against a student strength of 61 when it commenced in the year 2000.
- **Programmes:** Currently it offers B.E.(Hons.) degree programmes in seven engineering disciplines up from just two in 2000. All programmes are of 4 years duration with 7½ months practice school (Internship) in industries.
- **Graduated student strength:** Six batches totaling 962 students (702 boys and 260 girls) graduated till date.
- **Admissions Abroad:** More than 150 graduated students secured admission in over 50 universities of international repute in USA, Canada, India & rest of the world.
- **Employment of BPD graduates:** BPD graduates are employed by more than 200 reputed companies, viz., Microsoft, Seattle, Oracle, Sony Ericsson, Wipro, TCS, Petrofac, Etisalat, Honeywell, KPMG,

and so on or have taken up successful entrepreneurial ventures.

- **Accreditation:** BITS, Pilani along with BITS, Pilani - Dubai and Goa campus has been awarded the coveted “A” Grade scoring the highest points (3.71 on a scale of 4.00) among all private accredited universities in India by the National Assessment and Accreditation Council (NAAC), an autonomous body set up by UGC, Govt. of India.

Thus, in the last 10 years, BPD not only made great progress achieving a phenomenal growth in both quantity and quality of its deliverables but also received innumerable accolades in co- and extra-curricular activities, viz., sports, cultural, community service, etc.

In view of the popularity and excellence achieved over the past decade, BPD now aims to enhance the continuing education opportunities for the working professionals of the UAE and GCC countries. On the occasion of the completion of a decade of its educational excellence in Engineering & Technology, Pilani-Dubai has commenced offering six new evening programmes of great relevance to working professionals: i.e., an integrated first degree [M.Sc.(Tech.)] and four higher degree programmes [two M.B.A. and two M.E.], on successful completion of which degrees are awarded from the prestigious BITS, Pilani-Rajasthan, India.

### PROGRAMME INTRODUCTION

Microelectronics is a field related to study and microfabrication of electronic components which help miniaturizing the size of electronic circuits and systems made from semiconductors. Many components of normal electronic design such as transistors, capacitors etc., have their

microelectronic equivalent. They are employed in today's chip technologies that accommodate analog, digital and mixed signal circuits on micro-dimensional semiconductor wafers. As techniques improve, the scale of micro-electronic components continue to decrease. At smaller scales, the relative impact of intrinsic circuit properties such as interconnections (called the parasitic effects) may become more significant.

The M.E. Microelectronics programme aims at offering courses that provide necessary skill set required by microelectronics design engineer to find ways to compensate for or to minimize these effects, while always delivering smaller, faster, and cheaper devices in line with the current technological developments.

### LEARNING APPROACH

The M.E. programme is highly structured and modular in approach with classroom lectures, assignments and individual projects, enabling professionals to complete the Programme in a pace and duration suitable to them. Candidates will also be required to do a dissertation in the final semester.

### CURRICULUM

The curriculum for the M.E. Microelectronics programme will be the same as the one offered at BITS, Pilani-India. It has been specially designed to ensure development of a full-fledged Microelectronics Engineer. Student acquires a well-rounded academic qualification having core competency skills in microelectronics and an understanding of generic courses such as: Physics and Modeling of Microelectronic Devices, IC Fabrication Technology, VLSI Design, Analog IC Design, and so on.

Further, student's skills will be trained to be an efficient microelectronics professional, through a set of three elective courses, an indicative list of which is given below:

- VLSI Test and Testability
- Digital Signal Processing
- Fault Tolerant System Design
- Embedded System Design
- Advanced Analog and Mixed Signal Design
- Data Compression
- Advanced Architecture and Performance Evaluation
- RF Microelectronics
- Optoelectronic Devices, Circuits and Systems
- Integrated Electronic System Design
- Mobile and Personal Communication

In addition to the above, every student will pursue a dissertation during the final semester. Normally, a student needs to study for 64 credits to become eligible for the award of the degree.

### DURATION

Normally a student takes about 4 semesters (two years) to complete M.E. Microelectronics degree Programme requirements in terms of number of courses and credits. This duration gets reduced if the student enrolls in summer term courses too.

### CLASS TIMINGS

The programme is mostly aimed at working professionals and will normally be conducted during evening hours from Sunday to Thursday to suit their convenience.

### ELIGIBILITY CRITERIA FOR ADMISSION

Candidates must have B.E. / B. Tech. in the disciplines: Electrical and Electronics (EEE) / Electronics & Communication (ECE) / Electronics & Instrumentation (E & I) Engineering or Computer Science or M.Sc. (Physics) from recognized universities.

***Short-listed candidates may be required to appear for written tests and interviews.***

### FEE STRUCTURE

Application Fee	:	AED 200
Admission Fee	:	AED 1,500
Caution Deposit	:	AED 2,000
Tuition Fee per semester*	:	AED 20,000 (Payable in 2 installments)

\*Fee for the last semester will vary minimally based on the number of credits.

### APPLICATION PROCEDURE

Candidates interested in applying for the programme can collect the application form through any of the following modes:

- (a) From the Admissions Office, BITS, Pilani-Dubai, Dubai International Academic City, or
- (b) By E-mail request to [admission@bitsdubai.com](mailto:admission@bitsdubai.com), or
- (c) Download from the website [www.bitsdubai.com](http://www.bitsdubai.com)

Please refer to the "Instructions to Applicants" attached with the application form for details on application submission and admission procedure.

**CLASSES COMMENCE FROM 19<sup>TH</sup> SEPTEMBER 2010.**

**ADMISSIONS IN PROGRESS**

### FOR MORE DETAILS

Please contact:

Admissions Office, BITS, Pilani-Dubai, Dubai International Academic City, P.O. Box 345055, Dubai, UAE.

Tel: +971-4-4200700, 4200811, Fax: +971-4-4200822, Email: [admission@bitsdubai.com](mailto:admission@bitsdubai.com)

Website: [www.bitsdubai.com](http://www.bitsdubai.com)