Birla Institute of Technology & Science, Pilani
Pilani Campus

JOB DESCRIPTION

About BITS Pilani	**Birla Institute of Technology and Science (BITS Pilani)**, established in 1964 as a deemed university under Section 3 of the UGC Act, is a renowned science and technology institution with campuses in Pilani, Dubai, Goa and Hyderabad. Its Work Integrated Learning Programmes (WILP), established in 1979, offer B.Sc., B.Tech., M.Tech., M.Sc., Diploma and Certificate programmes for working professionals.
Industry/Service	Higher Education
Post/Job Title	Senior Instructor / Instructor (Full Time)
Job Type	The tenure will be for two years at a time, with further extensions subject to satisfactory performance – **(Senior Instructor)** Appointment for one year at a time, extendable up to four years, subject to satisfactory performance – **(Instructor)**
Reporting to	Prof. Parameswh Chidamparam, Head – Engineering Group
Works closely with	WILP faculty members and students, and software and hardware vendors.
Positions & Location	One position at Hyderabad (Off Campus); travel as required.
Principal Accountabilities & Responsibilities	• Embedded C/C++ and ARM Cortex-M or comparable MCU firmware • GPIO, interrupts, timers, ADC, PWM, UART, SPI, I2C and debugging of basic device interfaces • FreeRTOS/Zephyr laboratory exercises, flashing, build and debugging workflows • MCU board/instrument testing, oscilloscope, logic analyzer, DMM and regulated bench supply operation • Support IoT/DSP/FPGA lab setups: sensor connections, FPGA bitstream loading, tool setup and basic board tests schematic/pinout reading for safe testing, test documentation and equipment operation are required; PCB design, soldering, component replacement and board-level repair. • Toolchains/IDEs: GCC/GDB, STM32CubeIDE, MCUXpresso, VS Code or equivalents; JTAG/SWD debuggers and serial utilities • Test instruments: oscilloscopes, logic analyzers, digital multimeters, bench power supplies and CAN/LIN analyzers (automotive) • Basic Python/Bash scripting, Git, automated test scripts and documented reproducible board/SDK setups • Maintain validated firmware/RTOS environments and instrument configurations; use vendor-neutral equivalent equipment **Lab Deployment & Execution-** Set up and validate boards, peripherals, instruments and software before scheduled labs. Assist during on-campus or remotely supported sessions with flashing, communication interfaces, RTOS demonstrations, serial logs, measurements and student queries. **Technical Troubleshooting & Lab Development-** Test MCU/automotive boards and connections; investigate faults using oscilloscopes, logic analyzers, DMMs and debuggers. Configure SDKs/toolchains and maintain approved lab firmware, reference projects and automated test scripts. Escalate component-level repairs or facilities issues to responsible teams; such repair work is not a required competency. **Inventory Control & Lab Maintenance -**Maintain an accurate inventory and booking/checkout log for MCU kits, automotive ECU trainers, probes, test instruments, sensors and accessories.

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	Schedule preventive inspection and calibration of applicable instruments; coordinate servicing, procurement and replacement. **Documentation & Accreditation Audit Readiness**- Keep audit-ready experiment validation records, firmware versions, instrument logs, calibration records, equipment usage and issue-resolution notes; maintain organized repositories and lab documentation. **Safety, ESD Compliance & Student Support**-Guide safe operation of low-voltage embedded kits, automotive test benches and test instruments, including correct wiring, power limits and ESD precautions. Provide responsive learner support and promptly report hazardous or damaged equipment.
Qualification & Profile	• M.E/M.Tech Embedded Systems, Electronics, Electrical Engineering, Computer Engineering or a closely related discipline; strong hands-on foundation in embedded firmware, hardware testing and laboratory instruments. **(Senior Instructor)** • B.E./ B. Tech in Embedded Systems, Electronics, Electrical Engineering, Computer Engineering or a closely related discipline; strong hands-on foundation in embedded firmware, hardware testing and laboratory instrument **(Instructor)** • Minimum one year of hands-on experience in embedded hardware testing, firmware development/debugging and technical laboratory operation in industry or an academic institution.
Compensation	Up to ₹11 lakh per annum, commensurate with experience **(Senior Instructor)** Up to ₹09 lakh per annum, commensurate with experience **(Instructor)**
Apply Link	Candidates should submit their resumes through the following Google Form: https://forms.gle/mrexdRvwmdQ9pmGq9