Birla Institute of Technology & Science, Pilani
Pilani Campus

JOB DESCRIPTION

About BITS, Pilani	**Birla Institute of Technology & Science, (BITS Pilani)** is an Institution declared as Deemed to be University under **Sec. 3** of the **UGC Act** in 1964 and is a renowned science and technology institute. It is located in Pilani, Rajasthan, India. In addition to Pilani, BITS Pilani has campuses in Dubai, Goa, and Hyderabad. Work Integrated Learning Programmes (WILP) was established in 1979 focuses on providing continuing education to working professionals across different sectors. WILP offers BSc, B. Tech, M. Tech, MSc, Diploma and Certificate programmes to working professionals.
Industry/Service	Higher Education
Post/Job Title	Instructor / Visiting Faculty –Vehicle_ES_NW
Job Type	Regular, Full time.
Reporting to	Dean WILP through Assoc HoG.
Will also work very closely with	WILP Students, Faculty and Non-Academic Staff.
No. of positions	**One Position**
Job Location	**Pune**
Purpose	• Develop, deploy and maintain WILP labs in the areas of Automotive Communication, Networking, Cyber Security, Automotive Diagnostics, Safety Critical Automotive Systems. • Support student learning as per the course/ program requirement - requires scheduling and conducting labs, and evaluation • Support dissertation & organization problem solving from WILP Labs.
Principal Accountabilities & Responsibilities	**Key Responsibilities:** • **Lab deployment:** Deploy labs to the WILP students as per the course requirement and assess the lab components on time under the guidance of course faculty. • **Lab Development**: Automotive cyber systems and automotive diagnostics, safety critical automotive systems lab development - support the responsible faculty and the Experiential Learning Lead (ELL) from initiation, through proposal, procurement, commissioning, installation and development, develop lab exercises under the guidance of course faculty and also support the creation of audio-visuals for marketing/training purposes. • **Lab Maintenance**: Work with the Experiential Learning Lead (ELL) and the respective center in charge along with course faculty for maintenance of lab equipment, and upkeep of software licenses. • **Student Support:** Prompt resolution of student queries related to labs and prompt support in dissertation and organization problem solving in WILP labs.
Qualification and Personal Profile	• ME/MTech or BE/BTech with work experience in two or more of the following areas: embedded systems, microprocessors & controllers for automotive applications, vehicle communication protocols CAN, LIN, Ethernet, Flex ray etc..., automotive

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	networking & security, fundamental proficiency in embedded systems, software/hardware, networks, and security, automotive diagnostics, functional safety.
Other Skill and Ability Requirements	**Technical Knowledge** Experience (in 2 or more areas - Automotive communication, Networking, Cybersecurity) will be preferred as outlined below: • Knowledge of in-vehicle network protocols: e.g., CAN, LIN, FlexRay, Ethernet (including automotive-Ethernet) etc. • Experience with tools / software for network analysis, debugging (for example CANalyzer, CANoe, Wireshark or equivalent). • Embedded systems programming (C, C++), use of Linux (especially for automotive cybersecurity / networking roles) • Familiarity with automotive cybersecurity standards/regulations such as ISO/SAE 21434, UN R155 (vehicle cybersecurity regulation) or similar. • Work on soft skills: document your work, communicate your findings, collaborate effectively, understand system-level implications (e.g., network failures affecting vehicle performance). • Problem-solving skills, ability to work with cross-functional teams, debugging skills, attention to detail. • Willingness and capability to learn and keep up to date with automotive network standards and evolving technologies. • Tools & methods: penetration testing of vehicle networks, vulnerability scanning, intrusion detection for in-vehicle systems. • Functional safety and testing. • Familiarity with sensor/actuator diagnostics, diagnostic tools & equipment. • Knowledge of OBD, OBD-II, OBD-III, UBS,UDS. • Power converter and inverter modeling/simulation using MATLAB/Simulink. • Reliability, packaging and testing of electronic packages. • Exposure to functional safety (ISO 26262) and AUTOSAR architecture. • Get familiar with test benches, HIL setups, and ECU calibration tools. • Good to have 1–2-year work experience in two or more of the above areas. **Behavioral Competencies** • Effective communicator, ability to coordinate and resolve conflicts, good team player