TÜRKHAVACILIK UZAYSANAYİİ

TURKISH FIGHTER - X

We are seeking engineers for following roles of 5th gen fighter aircraft;

- Simulator Systems Engineer
- Embedded Training System - Systems Engineer
- Pilot Support Systems Engineer
- Environmental Control Systems Engineer
- Mechanical Systems Design Engineer
- Aircraft Integration Engineer for Aerodynamic and Flight mechanics
- Structural Design Engineer
- Propulsion and Secondary Power Systems Design Engineer

Please check details and send your CV.

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Simulator Systems Engineer

- Simulator and Training Systems is seeking Systems Engineers to support key simulator development activities in Ankara.
- Ideal candidates should have the requisite skills in modelling & simulation fundamentals to apply to 5th gen fighter project to gain life time experience.
- Candidates will be responsible for all systems engineering activities required to develop an engineering simulator
- Candidates are expected to have good communication skills and a good team player.

Primary Reponsibilities

- Performs requirement and need definition for engineering simulator* environment taking in coordination with stakeholders.
- Performs development of Simulator Development Strategy and Road Map
- Performs necessary coordination activities with simulator stakeholders like Human System Interaction, Flight Control, Operational Analysis, Mission and Weapon Teams.
- Develops main model architecture for engineering simulator and updates as required.
- Manages configuration items (hardware and software) of engineering simulator
- Performs integration and test activities for simulators
- Manages performance of critical suppliers, as required, to ensure subsystem compliance and delivery.
- Attends air shows and expo fairs in order to demonstrate related mock-ups/simulators

Qualifications (Required Skills/Experience)

- B. Sc. in Electrical/Electronical or Aeronautical/Aerospace Engineering or Computer Engineering preferably.
- Knowledge of modelling and simulation architectures and languages
- Knowledge of international standards on Modelling and Simulation
- Knowledge of Matlab, Simulink, Pyton, C,C++,C#
- Knowledge/Interest on modelling/simulation of Vehicle Dynamics, Mission and Weapon Systems

*Engineering Simulator is an environment consists of required models and physical elements (e.g. Cockpit Instruments, Flight Control elements) that simulates a 5th Gen Fighter according to improving and changing design maturities.

Embedded Training System - Systems Engineer

- Turkish Fighter - Simulator and Training Systems is seeking for Systems Engineers to support key Embedded Training System development activities in Ankara.
- Ideal candidates should have the requisite skills in modelling & simulation fundamentals design fundamentals to apply to 5th gen fighter project to gain life time experience.
- Candidates will be responsible for all systems engineering activities required to develop an Embedded Training System of Turkish Fighter.
- Candidates are expected to have good communication skills and a good team player.

Primary Reponsibilities

- Performs requirement and need definition for Embedded Training System environment taking in coordination with stakeholders.
- Performs development of Embedded Training System Development Strategy and Road Map.
- Performs necessary coordination activities with Embedded Training System stakeholders like Human System Interaction, Flight Control, Operational Analysis, Mission and Weapon Teams.
- Develops main model architecture for Embedded Training System and updates as required.
- Manages configuration items (hardware and software) of Embedded Training System.
- Performs integration and test activities for Embedded Training System.
- Manages performance of critical suppliers, as required, to ensure subsystem compliance and delivery.

Qualifications (Required Skills/Experience)

- B. Sc. in Electrical/Electronics/ Control or Aeronautical/Aerospace Engineering or Computer/ Software Engineering preferably(or equivalent departments).
- Knowledge of modelling and simulation architectures and languages
- Knowledge of international standards on Modelling and Simulation
- Knowledge of Matlab, Simulink, Python, C,C++,C#, OpenGl/DirectX, Graphics/Physics Engines
- Knowledge/Interest on modelling/simulation of Vehicle Dynamics, Mission and Weapon Systems
- Knowledge/Interest of 3D, Gaming Technology, Augmented/Mixed Reality, Artificial Intelligence preferably.

* Embedded Training System is a capability on the fighter aircraft initiated during the flight mission generating a Virtual World in real time interactively to provide pilot training of installed capabilities (e.g. Weapons, Sensors, Flight) that simulates a 5th Gen Fighter missions.

Pilot Support Systems Engineer

- Turkish Fighter Air Vehicle Systems design department is in search for Design/Systems Engineer(s) to support key engineering activities for their design team in Ankara.
- Ideal candidates should have the requisite skills in mechanical / fluidic systems engineering design fundamentals to apply to 5th gen fighter project to gain life time experience.
- Candidates will be responsible for requirement definition, design and integration activities for Ejection Seat, Oxygen, G protection, CBRN protection and Pilot Flight Equipment.
- Candidates should be able to create design solutions that will comply with the system requirements and perform trade-off studies for these solutions.
- Candidates should be able to perform modelling and simulation activities based on the selected design solutions.

Primary Reponsibilities

- Defines, validates and verifies system requirements and interfaces, create design solutions that will comply with the system requirements.
- Performs trade studies, system modelling and equipment (ducts, pipes, valves, oxygen bottles, oxygen generators, etc.) sizing studies.
- Performs pressure loss / flow rate analyses and simulations as required, defining losses on system ducts, pipes, valves and similar components.

Qualifications (Required Skills/Experience)

- B. Sc. in Mechanical, Aeronautical, Chemical Engineering or Part-time students
- Knowledge of mechanical / fluidic system design principles
- Knowledge of ejection seat, oxygen generation, g protection, CBRN protection systems.
- Knowledge or experience in systems engineering processes.
- Knowledge of software used in physical system modelling; such as Amesim (or similar) or MATLAB / Simulink.
- Good communication and team work skills

Environmental Control Systems Engineer

- Turkish Fighter Air Vehicle Systems design department is in search for Design/Systems Engineer(s) to support key engineering activities for their design team in Ankara.
- Ideal candidates should have the requisite skills in thermal / fluidic systems engineering design fundamentals to apply to 5th gen fighter project to gain life time experience.
- Candidates will be responsible for requirement definition, design and integration activities for Cabin Pressure Control, Heating, Cooling, Ventilation subsystems.
- Candidates should be able to create design solutions that will comply with the system requirements and perform trade-off studies for these solutions.
- Candidates should be able to perform modelling and simulation activities based on the selected design solutions.

Primary Reponsibilities

- Defines, validates and verifies system requirements and interfaces, create design solutions that will comply with the system requirements.
- Performs trade studies, system modelling and equipment (heat exchangers, compressors, turbines, pumps, etc.) sizing studies.
- Performs pressure loss / flow rate analyses and simulations as required, defining losses on system ducts, pipes, valves and similar components.

Qualifications (Required Skills/Experience)

- B. Sc. in Mechanical or Aeronautical Engineering or Part-time students
- Knowledge of thermal / fluidic system design principles
- Knowledge of Heating, Ventilation and Air Conditioning systems, Cabin Pressure Control systems.
- Knowledge or experience in systems engineering processes.
- Knowledge of software used in physical system modelling; such as Amesim (or similar) or MATLAB / Simulink.
- Good communication and team work skills

Mechanical Systems Design Engineer

- Turkish Fighter mechanical systems design departmant is seeking for Design Engineer to support key technical thrusts for the design team in Ankara.
- Ideal candidates should have the requisite skills in mechanical design fundamentals to apply to 5th gen fighter project to gain life time experience.
- Candidates shall be responsible for mechanical design using 3D CAD tools to model geometry and create detailed drawings.
- Candidates should be able to support the build process and ensure design and assemblies meet technical performance objectives, as well as cost, and schedule constraints.

Primary Reponsibilities

- Performs trade studies, conceptual and detail design definition that meet or exceed specifications for aircraft.
- Performs, integrates and documents mechanical analyses and test results to validate and verify systems and components meet requirements and specifications.
- Creating 3D conceptual and detailed mechanical systems design.
- Create technical specifications design components and assemblies in 3D modeling tools
- Develops new design/analysis processes and tools to improve effectiveness, quality and efficiency of the development effort.
- Manages performance of critical suppliers, as required, to ensure subsystem compliance and delivery.

Qualifications (Required Skills/Experience)

- B. Sc. in Mechanical Engineering or Part-time students
- Knowledge of mechanical design principles
- Knowledge of materials and manufacturing methods
- 3D CAD design experience
- Knowledge of Product lifecylce managements (PLM) software
- Good communication and team work skills

Aircraft Integration Engineer for Aerodynamic and Flight mechanics

- Turkish National Combat Aircraft Program is seeking engineers to joın product system engineers in Aircraft integration field on 5th generation low observable fighter A/C design and integration.
- The location will be in Ankara/Türkiye.
- Responsibility and duties will be in scope of directing design and analyses and how to integrate output for best or compromised performance of the final product.
- Integration towards best performing aircraft will include multi-disciplinary tasks other than aerodynamics & flight mechanics, including weight and thermal management aspects together with disciplines of aero-elastic, aero-acoustics and aero-loads.
- Candidates must have at least aerodynamic analysis and design background and skills. Multi-disciplinary thinking and development capabilities should be also incorporated and will be sought.
- Basic skills and background must be on aerodynamic design and analysis. This, not only limited with CFD background, will include capability of usage of every level accuracy and fidelity of the tools and testing field also (i. Wind tunnel testing methodologies etc.).
- Aircraft Integration field covers
    - aerodynamic design and analyses and flight mechanics and performance
    - Aero-elastic, aero-acoustics and aero-loads calculations/conditions design feedback
    - Weight estimation, basic estimation methods including mass-distribution aspects (CoG and inertias). Weight management background and budgeting skills
    - Thermal Management skills and budgeting
    - Basic level of understanding and commenting on Operational fields (OA analyses, survivability/lethality analysis and related feedback etc.)
    - Basic level of understanding and commenting on Low Observable Design, design constraints and guidelines
    - Basic understanding and commenting on structural and mechanical design
    - Basic understanding and commenting on hydraulic, electrical loads, environmental conditioning etc
    - Intermediate level of knowledge on propulsion systems together with air-inductions systems (includes air-intake and duct and related systems)

Primary Responsibilities

- Above mentioned engineering skills and experiences are to be addressed under Aircraft Integration as one of the members of product team.
- So called product engineers are primarily requested to assure analyses and designs are carried out in right time and sequence within required fidelity.
- Assuring that risks are taken during compromise or optimization process throughout design evolution of the final product
- Assuring that necessary activities are realized respecting the program cost and schedule.

Qualifications (Required Skills/Experience)

- B. Sc. In Aeronautical Engineering or at least Mechanical Engineering with M.S. Degree on Aerodynamics
- Ability of using wide variety of tools and post-processing techniques.
- 3D CAD design experience
- English as the second language (fluent in writing, reading communication)
- Good communication and team work skills
- Required skills mentioned above (Aircraft Integration)

Structural Design Engineer

- Turkish Fighter structural design departmant is seeking for Design Engineer to support key technical thrusts for the design team in Ankara.
- Ideal candidates should have the requisite skills in mechanical & structural engineering design fundamentals to apply to 5th gen fighter project to gain life time experience.
- Candidates shall be responsible for structural design using 3D CAD tools to model geometry and create detailed drawings.
- Candidates should be able to support the build process and ensure design and assemblies meet technical performance objectives, as well as cost, and schedule constraints.

Primary Reponsibilities

- Performs trade studies, conceptual and detail design definition that meet or exceed specifications for aircraft.
- Performs required first order analysis for aero, structures, payload, weight & balance, power, etc to size systems to vehicle technical constraints to meet range, speed, and performance metrics.
- Creating 3D conceptual structural design.
- Create technical specifications design components and assemblies in 3D modeling tools
- Works under direction of principal engineer to support new concepts designs, brain-storming efforts and ‘out of the box’ next generation structural design.
- Manages performance of critical suppliers, as required, to ensure subsystem compliance and delivery.

Qualifications (Required Skills/Experience)

- B. Sc. in Mechanical or Aeronautical Engineering
- Knowledge of mechanical design principles
- Knowledge of materials and manufacturing methods
- 3D CAD design experience
- Knowledge of Product lifecylce managements (PLM) software
- Good communication and team work skills

Propulsion and Secondary Power Systems Design Engineer

JOB DESCRIPTION

- Perform system integration design activities in Propulsion Systems such as Engine (Turbofan), APU and/or Engine Starting System on a 5th generation fighter aircraft.
- Responsible for the propulsion systems integration design.
- Generate system design requirements and their validation and verification methods.
- Carrying out system architecture and functional allocation activities.
- Define technical specifications of the propulsion systems and system components.
- Define system and equipment/components test requirements and analyzing.
- Ability to support system rig, ground and flight test planning activities and test instrumentation and their calibration requirements.

REQUIRED SKILLS

- BS or higher degree in Mechanical Engineering, Aerospace Engineering, or comparable degrees.
- Knowledge about Propulsion systems and/or integration design activities in aerospace industry.
- Knowledge about system engineering and/or requirement management activities and product development processes and standards.
- Performing SWaP-C analysis & Trade-off studies for system architecture and design.
- Knowledge about Catia V5 or Catia V6 CAD programs.
- Knowledge about materials and manufacturing methods.
- Knowledge about qualifications and certification.
- Experience in requirement based working with suppliers

PREFFERED ADDITIONAL SKILLS

- Knowledge or experience about propulsion systems performance analysis, modeling and simulations
- Knowledge or experience about propulsion systems rig, ground, flight test activities
- Knowledge about detail design and GDT