The CLAS12 Detector and Its Physics Program at the JLAB 12 GEV Energy Upgrade LATIFA ELOUADRHIRI, Jefferson Lab, CLAS COLLABORATION — The Jefferson Lab 12 GeV upgrade provides the kinematic reach to access generalized parton distributions and transverse momentum dependent parton distributions in a large kinematic range in the nucleon's valence quark regime. The CLAS12 detector has been developed as an upgraded version of CLAS with high luminosity capabilities, and improved particle identification. The detector construction has started in 2009. A broad program has been developed to map the nucleon's 3-dimensional spin and flavor content through the measurement of deeply virtual exclusive and semi-inclusive processes. Other programs to study nucleon elastic and transition form factors, as well as nuclear phenomena have also been approved. An overview is presented of the CLAS12 detector and the initial physics program after the energy doubling of the JLab electron accelerator.

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