The production planning for a general job shop are subjected to break down, repair of machines and lower and upper bound constraints on work in process. In general the problem is characterized by uncertainty, subjectivity, imprecision and ambiguity. These characteristics of the problem make fuzzy set theory a suitable approach. Since fuzzy sets and fuzzy logic are powerful mathematical tools for modeling and controlling uncertain systems in industry, humanity and nature. They are facilitators for approximate reasoning in decision-making in the absence of complete and precise information. Their role is significant when they are applied to complex phenomena not easily described by traditional mathematics.

In general machine capacities and demand processes are assumed to be finite Markov chains till the year 1997. We in this paper approach the problem using fuzzy theory. We transform the model into a fuzzy model and define grade function for the constraints.
Using fuzzy measure and fuzzy integrals we arrive at an optimal solution. Thus we obtain a method for choosing rates of production on various machines over time to minimize the expected discounted costs of production and inventory/backlog over an infinite horizon is estimated using fuzzy theory.