1096-49-2448 **Hem Raj Joshi***, joshi@xavier.edu. *Optimal Control of SIR Model with Education.* Preliminary report.

We develop an optimal control model of Susceptibles, Infected and Recovered (SIR) type. In this model, the control is education, which helps to change behaviors of the susceptible class and this class contributes to lower the infected and thus recovered/removed population. We determine the steady states and do a stability analysis, solve an optimal control problem with the objective function that minimizes the infected population, and maximizes the susceptible population. We solved optimality system numerically using Runge Kutta method. (Received September 17, 2013)