

COURSE TITLE	TE142316: Intelligent Control Systems Credits: 3 Semester: III
LEARNING OBJECTIVES	Students are able to analyze and design the intelligent control system.
COMPETENCY	<ul style="list-style-type: none"> • Students are able to analyze intelligent control systems. • Students are able to design intelligent control systems.
SUBJECTS	<ul style="list-style-type: none"> • Fundamental concepts of intelligent control systems • Fuzzy Logic Control • Artificial Neural Networks • Genetic Algorithms
MAIN REFERENCES	<ul style="list-style-type: none"> • <u>Neuro-fuzzy and Soft Computing</u>, by Jang, Sun & Mizutani, Prentice Hall, 1997. • Goldberg, D. E., <u>Genetic Algorithms in Search, Optimization and Machine Learning</u>, Addison-Wesley, Reading, MA, 1989, Chaps. 1 and 4, pp. 77, 106-122.
OPTIONAL REFERENCES	<ul style="list-style-type: none"> • <u>Fuzzy Control</u>, Kevin M. Passino and Stephen Yurkovich, Addison-Wesley Longman Inc., 1998. • <u>Soft Computing and Intelligent Systems Design – Theory, Tools, and Applications</u>, F.O.Karray and C.W.de Silva, Addison-Wesley, 2004. • <u>Fuzzy Sets and Fuzzy Logic</u>, G.J.Klir and B.Yuan, Prentice-Hall, 1995. • <u>Adaptive Approximation Based Control</u>, J.A.Farrell and M.M.Polycarpou, Wiley, 2006. • <u>In Introduction to Fuzzy Sets</u>, by Pedrycz & Gomide, MIT Press, 1998. • <u>Evolutionary Computation</u>, by Dumitrescu et al., CRC, 2000.
PREREQUISITE	<ul style="list-style-type: none"> • Linear System Theory