

Course Title	Engineering Economics & Costing
Degree Program	B.Sc. in Industrial Engineering
Module	Industrial Management
Module Coordinator	
Lecturer	Mengistu.m contact email:mengistumanaye2@gmail.com
ECTS Credits	5 Credit Points
Course Description/Course Contents	Course Description: The Engineering economics part of this course studies the basic concept of time value of money and methods for alternative and investment evaluation. The study covers definition and scope of engineering economics, cash flow, concept of time value of money, present equivalent value, annual value, internal rate of return, payback method, profitability index method, sensitivity analysis, depreciation, inflation and deflation, replacement analysis, tax analysis, public investment cost-benefit analysis. The course provides ability in conducting analysis and decision making for alternative selection or investment evaluation using economic criteria Costing part of this course studies the concept of cost and method for production costing and its accounting system for documentation process. The study covers accounting process, financial report, concept of cost, direct material cost, direct labor cost, indirect factory cost, order costing, process costing, byproduct and joint product, standard costing system and variance analysis, break event analysis. The course provides understanding on the cost accumulated during production and ability to do costing as well as its documentation in an accounting system. Course Outline: Chapter-1 Introduction Time value of money Depreciation Cost comparison of alternation methods Economic Analysis of industrial operations Decision making with probability Chapter-2 Cost Estimation Cost Accounting, Classification of cost, Element of cost, Type of Estimation, Method of Estimation, Data requirement & sources, Collection of cost, Allowance in Estimation, Costing methods, Costing of job process and operations, Uniform costing Chapter-3 Production cost Estimation Estimation of material cost, Labor cost, Overhead cost, Collection of overheads

	Chapter-4 Cost Estimation & Analysis of re-engineering of manufacturing process & reverse engineering of products Cost analysis, marginal costing, Standard costing & variance analysis, Budgeting.
Pre-requisites	Introduction to economics
Semester	Year 2, Semester II
Status of Course	Compulsory
Teaching & Learning Methods	Lectures supported by tutorials.
Assessment/Evaluation & Grading System	Assignments 10% Quizzes 20%, Tests 20%, Final Examination 50%.
Attendance Requirements	Minimum of 85% attendance during lecture hours.
Literature	Textbook: Engineering Economics for Professional Engineers' Examination, 3rd Ed., Max Kurtz, P.E. (1985) References: 1. Engineering Economy, 4th Ed., Leiland Blank, P.E. & Antony Tarquin, P.E. (1998) 2. Blank, P.E.L, and tarquin, P.E.A. (2005) Engineering Economy, 6th Edition, McGraw-Hill, NY, USA 3. Boardman, A.E., Greenberg, D.H., Vining. (2001). Cost Benefit Analysis, Prentice, NY, USA. 4. Fabrycky, W.J. and Thusesen, G.J. (2001). Engineering Economy, 9th Edition, Prentice-Hall, Inc. NJ, USA 5. Hilton, R.W., Maher, M.W, and Selto, F.H. (2000). Strategies for Business Decisions, USA 6. Jonson, B and Newmwn, D.G. (1995). Engineering Economy, 5th Edition, Engineering Press, CF, USA 7. Park, C.S., (2002). Contemporary Engineering Economic