**Dire Dawa University**

**School of Business and Economics**

**Department of Economics**

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**MSc. in Development Economics**

**Economics Department Curriculum Committee**

**January, 2014**

**Dire Dawa, Ethiopia**

**List of Courses**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **S.No.** | **Course Name** | **Course Code** | **Cr. Hrs** | **Course Type** |
| 1 | Mathematical Economics  | Econ 511 | 3 | Common |
| 2 | Advanced Microeconomics | Econ 512 | 3 | Common |
| 3 | Advanced Macroeconomics | Econ 513 | 3 | Common |
| 4 | Development Economics I | Econ 521 | 3 | Core |
| 5 | Development Economics II | Econ 522 | 3 | Core |
| 6 | International Trade, Finance and Development  | Econ 523 | 3 | Core |
| 7 | Advanced Econometrics Theory and Application | Econ 531 | 4 | Common |
| 8 | Research Methods for Economists | Econ 532 | 2 | Common |
| 9 | Institutional Economics | Econ 541 | 3 | Common |
| 10 | Economics of Agriculture & Rural Development | Econ 651 | 3 | Elective |
| 11 | Project Design and Analysis | Econ 661 | 3 | Elective |
| 12 | Seminar in Development Economics | Econ 671 | 1 | Core |
| Total | 31 |  |
| 13 | Master Thesis  | Econ 672 | 6 | Core |

**NB:** Master Thesis includes proposal and main research

1. **Course Breakdown over Years and Semesters**

**Year I semester I**

|  |  |  |  |
| --- | --- | --- | --- |
| Course title | Course code  | Credit hour | Type  |
| Mathematical Economics  | Econ 511 | 3 | Common |
| Advanced Microeconomics | Econ 512 | 3 | Common |
| Advanced Macroeconomics  | Econ 513 | 3 | Common |
| Development Economics I | Econ 521 | 3 | Core |
|  Total  | 12 |  |

**Year I Semester II**

|  |  |  |  |
| --- | --- | --- | --- |
| Course title | Course code  | Credit hour | Type  |
| Institutional Economics | Econ 541 | 3 | Common |
| Advanced Econometrics Theory and Application | Econ 531 | 4 | Common |
| Development Economics II | Econ 522 | 3 | Core |
| International Trade, Finance and Development  | Econ 523 | 3 | Core |
| Research Methods for Economists | Econ 532 | 2 | Common |
|  Total  | 15 |  |

**Year II Semester I**

|  |  |  |  |
| --- | --- | --- | --- |
| Course title | Course code  | Credit hour | Type  |
| Economics of Agriculture and Rural Development | Econ 651 | 3 | Elective  |
| Project design and analysis | Econ 661 | 3 | Elective  |
| Seminar in development economics  | Econ 671 | 1 | Core |
|  Total  | 4 |  |
| Master Thesis  | Econ 672 | 6 | Core |

**Year II Semester II**

|  |  |  |  |
| --- | --- | --- | --- |
| Course title | Course code  | Credit hour | Type  |
| Master Thesis  | Econ 672 | 6  | Core |

**NB**: The elective courses will be delivered if at least five students choose it.

1. **Course Descriptions, Modes of Delivery, Assessment and References**

**Econ 511: Mathematical Economics**

**Classification:** Common **Number of Credits:** 3

**Course Objectives**

The general purpose of the course is to enable students understand the necessary mathematical concepts for Economics and apply them in economic models of the national economy. The specific objectives are as follows:

* To equip the students with knowledge and skills to enable them apply Mathematics in economic analyses;
* To facilitate the student to carry out both quantitative and qualitative analysis of economic systems; and
* To provide a framework for enabling the student to see the application of mathematical techniques to economics through examples.
1. **Expected Learning Outcomes**

At the end of the course, the student will be able to:

* Apply concepts of functions and linear algebra in developing and using basic economic models;
* Apply calculus techniques (differential and integral) in maximization and minimization problems as well as marginal analysis and elasticity;
* Apply differential and difference based techniques in developing dynamic economic models;
* Identify and solve optimization problems in Agricultural Economics using various optimality criteria based on deterministic functions; and
* Solve optimization problems for dynamic systems using various optimality criteria
1. **Prerequisites**

The student should have covered basic courses inclusive of the following aspects:

􀁸 **Elementary matrix algebra and linear equations and inequalities:** Sets and set operations, basic matrix operations and inversions, properties of matrices, vectors and vector operations, input-output concept, graphical representation of equations, solutions to simultaneous linear equations, simple national income models, demand and supply curves, roots of the quadratic equation, break-even point, discontinuous functions.

􀁸 **Series:** Arithmetic and geometric progressions, exponential series and logarithms, discounting, annuities and sinking funds, Taylor and Maclaurin’ series and theorems.

􀁸 **Calculus:** Concept of derivatives as applied to elasticity of demand, maxima and minima, profit maximization, partial differentiation, basic integration techniques as related to consumer surplus and producer surplus.

1. **Course content**

**Topic 1: Application of Sets, Functions and Linear Algebra in Economics**

􀁸 Review of Matrix algebra and its applications, linear spaces and subspaces, convex and quasi-convex sets, interior and relative interior of convex sets, dimensions of convex sets, hyper-planes and extreme points of convex sets, review of series, continuity, differentiability and sub-differentiability of convex functions.

􀁸 Linear systems and examples of linear models (linear models for production, Markov models of employment etc.), systems of linear equations, economic applications (budget sets in commodity space, the investment model e.t.c.).

􀁸 Portfolio analysis, activity analysis (for example, efficiency, Leontief Models, feasibility analysis) and Taylor Polynomials.

**Topic 2: Application of Differential and Integral Calculus in Economics**

􀁸 Review the rules of differentiation, implications of differentiation in economics, applications to cost and revenue analysis, profit maximization in several markets, maximization of tax revenue.

􀁸 Review the rules of integration, implications of integration in Economics, calculation of areas between curves, numerical methods of integration, producer and consumer surplus.

􀁸 Review partial differentiation, total derivatives, implicit differentiation, maxima and minima, marginal analysis and elasticity of demand.

**Topic 3: Application of Differential and Difference Equations**

􀁸 Ordinary differential equations of the first and second order, homogeneous and non-homogeneous differential equations, existence and uniqueness of solutions of differential equations, concepts of partial differential equations and their applications, and systems of differential equations.

􀁸 First and second order difference equations, systems of difference equations, economic models that emerge from difference equations such as cobweb model, compound interest and capital addition, consumption-investment models, and inflation unemployment model.

􀁸 Concepts of stability and instability, stability and instability theorems, conditions for stability, stability tests, application to stability of price regulation process, indirect money metric utility functions and converse of Euler’s theorem.

**Topic 4: Elements of Linear and Non-Linear Programming**

􀁸 Application of convex set theory to programming, Lagrange function and its saddle points, duality and its implications, pairs of dual problems in Convex Programming (CP), Sleiter condition, Kuhn-Tucker theorem for CP, necessary and sufficient conditions for optimality for CP in differential form.

􀁸 Application of quasi-convex functions to optimisation problems, necessary and sufficient conditions for optimality as applied to efficient resource use, utility maximization problems subject to budgetary constraints.

􀁸 Linear programming and optimality conditions, general problems of linear and non-linear programming, local and global optimality, regularity conditions for constraints, Kuhn- Tucker theorem for smooth non-linear programming problems, theorems of marginal values for CP problems and their economic interpretation.

􀁸 Differentiability of solutions and Lagrange multipliers of linear and non-linear programming problems, relations to marginal values.

􀁸 Applications to the theory of demand using utility functions, demand functions and Slustky equation (decomposition of demand and supply), other economic models such as those based on dynamic programming.

**Topic 5: Optimization and Dynamic Analysis**

􀁸 Constrained and unconstrained optimizations (first and second order conditions, global maxima and minima, economic applications such as profit maximization and cost minimization, discriminating monopolist, equality and inequality constraints, mixed constraints), constrained optimisation (multiplier, envelope theorems, bordered Hessian condition), homogeneous and homothetic functions.

􀁸 Maximum principle as a necessary condition for optimality in finite interval for discrete and continuous time, example of model of planning with finite horizon, Ramsey’s model on infinite interval, model of optimal economic growth in discrete time, calculus of variations in continuous time, Euler equations as first order extremum condition, relationship between maximum principle and Kuhn-Tucker theorem in discrete case, Pareto optimality and necessary and sufficient conditions.

􀁸 Optimization over time

􀁸 Dynamic optimization: Discrete time dynamics, Theory of optimal control, Calculus of variation, and Current value of Hamiltonian.

**6. Mode of Delivery**

Each student will be expected to spend at least 3 hours of independent study for every contact hour on each topic. Practicals will focus on application of the techniques to specific cases in agricultural economics as well as use of computer programs for analysis. Seminars will involve presentations of review and application on particular topics by each student for peer review. The Contact hours will be three lecture hours per week and one practical (math lab) hour per week for a total of 15 weeks.

**7. Assessment Method**

This will be through assignments & mid-term test (20%), term paper/project (30%) and final examination (50%).

**8. Course Materials**

**Recommended Textbooks**

1. Chiang, A.C. (1984). *Fundamental Methods of Mathematical Economics*. 3rd ed., London: McGraw-Hill Book Company.
2. Silberberg, E. & W. Suer, 2001. *The Structure of Economics: a Mathematical Analysis* 3rd edition, McGraw Hill Book co.
3. Simon, C. P., and Blume, L. (1994 or latest edition). *Mathematics for Economists*. W. W. Norton & Company.

**Further Readings**

1. Samuelson, P. (1983). *Foundations of Economics Analysis.* London: Harvard University Press.
2. Timbrell, M. (1990). *Mathematics for Economists.* Oxford: Basil Blackwell.
3. Weintraub, R. (1990). *Mathematics for Economists - An integrated Approach.* Cambridge: Cambridge University Press.
4. Journalarticles illustrating the use of mathematics in developing conceptual models which are then linked to empirical analyses

**Econ 512: Advanced Microeconomics**

**Classification:** Common **Number of Credits:** 3

**Course Objectives**

This course provides a theoretical foundation in Economics and its application for almost all other courses in the program. Specifically, the course is intended to enable students:

* Acquire and use the language and logic of microeconomic theories of the consumer and the firm;
* Apply microeconomic theories to problems of agriculture, rural development, and the environment; and
* Acquire knowledge of the practical uses of Microeconomics in research and management.
1. **Expected Learning Outcomes**

By the end of the course, students should be able to:

* Apply the Lagrangian technique of constrained optimization;
* Derive and apply individual demand functions;
* Derive the market demand functions;
* Derive elasticity’s and apply them;
* Explain Pareto optimum conditions;
* Show the gains from exchange using the Edge worth Box;
* Understand the fundamental theorems of welfare economics and application;
* Analyze the behavior of the firms
1. **Prerequisites**

Students enrolled for this course are expected to have acquired competence in undergraduate Microeconomics and Mathematics. In Microeconomics, mastery up to the intermediate undergraduate level is expected. In Mathematics, students are expected to have a working knowledge of Algebra, Analytic Geometry, and Differential Calculus.

1. **Course Description**

An in-depth study of microeconomic theory and its applications as represented by published articles in academic journals and other contemporary literature. Topics may include individual decision making of the consumer and the producer, market analysis and welfare economics and analysis.

**Part I: Individual Decision Making**

**Topic 1: Consumer Behavior Theory**

* 1. **Introduction**
	2. **Consumption set and Budget constraint**
	3. **Preference and Utility**
	4. **Utility Maximization and Optimal choice**
	5. **Indirect Utility, Expenditure and money metric utility function, and Some important Identities**
	6. **Dual Utility direct and indirect utility**
	7. **Properties of consumer demand**
* Income changes and consumption choice
* Price changes and consumption choice
* Income-substitution effect; Slutsky and Hicks equation
* Continuity and differentiability of demand function
* Inverse demand function
	1. **Reveled Preference**
	2. **Topics in demand Behavior**
* Endowments in the budget constraint
* Income – Leisure choice model
* Homothetic utility functions
* Aggregating across goods
* Aggregating across consumers
	1. **Elasticity of Demand Functions**
* Cross-price elasticity of demand
* Elasticity’s for various types of demand functions
* The relationship between price elasticity and total revenue for linear demand functions
* Elasticity of substitution in consumption

**Topic 2: Theory of the Firm**

* 1. Production Technology
	2. Profit Maximization
	3. Cost and Profit Functions
	4. Cost Minimization
	5. Relating Demand Functions to Profit Functions

**Topic 3: The Problem of Choice in Situations Involving Risk**

* 1. The Axioms
	2. Expected utility
	3. Attitudes towards risk
	4. Risk and insurance

**Part II: Strategic Behavior and Market**

**Topic 4: Game Theory**

* 1. Introduction
	2. Description of a Game
	3. Solution concepts
	4. Repeated Game
	5. Refinement of Nash Equilibrium
	6. Games with Incomplete information

**Topic 5: Market Analysis**

* 1. Perfect competition
	2. Pure Monopoly
	3. Monopolistic Competition
	4. Oligopoly
	5. Monopsony

**Part III: General Equilibrium Theory and Social Welfare**

**Topic 6: Consumption Efficiency and Gains from Exchange**

* 1. Partial Equilibrium analysis
	2. The structure of general equilibrium analysis

**Topic 7: Theory of Welfare**

* 1. Pareto Efficiency of Allocation
	2. First fundamental theorems of welfare economics
	3. Second fundamental theorems of welfare economics
	4. Non-convex production Technologies and Marginal cost pricing
	5. Pareto Optimality and Social welfare maximization
	6. Political overtones

**6. Mode of Delivery**

The course materials will be delivered through lectures, reading and homework assignments. There will be 3 contact hours per week and 9 hrs of independent study per week for the 16-week semester.

**7. Assessment Methods**

The following assessment methods will be used:

* Assignments & Continuous Assessment Tests (CATs) 20%
* Project/term paper 30%
* Final examination 50%

The assignments will consist of theoretical and applied microeconomic problems to be solved by the students. The CATs will be based on the lectures, readings, and homework assignments. The final examination will test knowledge gained throughout the course.

**8. Course Materials**

**Recommended Textbooks**

* Hal. Varian, (1992), Microeconomic Analysis 3rd Ed. W.W.W. Notern & Compancy, INC. New york
* Nicholson, Walter. 2002. *Microeconomic Theory: Basic Principles and Extensions,* 8th Edition. London: South-Western (Thomas Learning).
* Henderson, J.M., and R.E. Quandt. 1980. *Microeconomic Theory: A Mathematical Approach*, 3rd Edition. London: McGraw Hill.

**Further Readings**

* Baumol, William J. 1999. *Economic Theory and Operations Analysis*, 4th Edition. New Delhi: Prentice-Hall of India.
* Binger, Brian, and Elizabeth Hoffman. 1998. *Microeconomics with Calculus*, 2nd Edition.
* Reading, Massachusetts: Addison-Wesley.
* Chiang, Alpha C. 1985. *Fundamental Methods of Mathematical Economics*. London: McGraw Hill.
* Dowling, Edward T. 2001. *Schaum’s Outline: Introduction to Mathematical Economics*. 3rd Edition. New York: McGraw-Hill.
* Harkwick, P., B. Khan, and J. Langmead. 1996. *An Introduction to Modern Economics*, 4th Edition. New York: Addison Wesley Longman Publishing.
* Lipsey, R. G., and K. A. Christal. 1999. *Principles of Economics*, 9th Edition. Oxford University Press.
* Salvatore, Dominick. 1992. *Schaum’s Outline of Theory and Problems of Microeconomic Theory*. 3rd Edition. New York: McGraw-Hill.
* Silberberg, E. & W. Suer, 2001. *The Structure of Economics: a Mathematical Analysis* 3rd edition, McGraw Hill Book co.
* Wetzstein, Michael. 2004. *Microeconomic Theory: Concepts and Connections with Economic Applications*. South-Western College Publishers.

**Econ 513: Advanced Macroeconomics**

**Classification**: Common **Credits Hours**: 3

1. **Course Objectives**

This course is an advanced treatment of macroeconomic theory, models, practice, and policies. The course presents a critical review of both mainstream and structuralist macroeconomic traditions. The relevance of the forgoing to the contemporary world of developed and developing countries, specifically to the African context will be adequately emphasized.

The objectives of the course are:

* To develop a thorough knowledge of different approaches in Macro-Economics;
* Develop a critical perspective in macroeconomics theory and applications;
* Expose the students to the nature and importance of linkages between agriculture and the macro-economy; and
* Examine theories and methods as applied in developing countries
1. **Expected Learning Outcomes**

At the end of the course the students are expected to:

* Understand the structure of a macroeconomic system and the underlying theoretical framework as well as controversies and debates;
* Apply methodology and techniques studied in conceptualizing macro-economic issues;
* Analyze relevant macroeconomic policies and issues, especially those that relates to agriculture; &
* Evaluate macroeconomic policies and their impacts in contemporary developing countries.
1. **Prerequisites**

Students will be required to have completed at least upper undergraduate Macroeconomics. The student should have covered IS-LM analysis, open economy macroeconomics and growth theories. Those not meeting the prerequisite should take remedial courses in preparation. Mathematical Economics at undergraduate especially Calculus and Matrix Algebra is required and should also be taken as a remedial course if prerequisite is not met.

1. **Course Content**

**Topic 1: Aggregate Demand and Aggregate Supply**

* 1. The aggregate labour market
	2. Aggregate Demand: Review of the IS-LM Model
	3. Schools in macroeconomics

**Topic 2: Dynamics in Aggregate Demand and Supply**

* 1. The adaptive expectations and stability analysis
	2. Investment, capital stock and stability
	3. Wealth effects and the government budget constraints

**Topic 3: Real Business Cycle**

* 1. Introduction
	2. Theories of Economic fluctuations
	3. Baseline Real business cycle model
	4. Household Behavior
	5. Solving the model in general case
	6. Implications

**Topic 4: Consumption and Saving Theories and Application**

* 1. Keynesian Consumption Function
	2. Life- Cycle Hypothesis
	3. Consumption under Certainty: Permanent Income Hypothesis
		1. Saving and Consumption
	4. Consumption under uncertainty: Random Walk Hypothesis
		1. Interest rate and saving
		2. Interest Rate and Consumption Growth
	5. Consumption and Risky Assets
	6. Beyond Permanent Income Hypothesis
		1. Buffer-stock saving
		2. Precautionary saving

**Topic 5: Investment of Theories**

* 1. Investment and cost of Capital
	2. Model of Adjustment with Adjustment Cost
	3. Tobin’s ‘q’ model of Investment
	4. Uncertainty and Investment
	5. Financial Market Imperfection and Investment

**Topic 6: Rational Expectations and Economic Policy**

* 1. Some Facts about Economic Fluctuations
	2. Theories of fluctuations
	3. Baseline in Real Business Cycle Model
	4. Household Behavior
	5. Empirical applications
	6. Policy Imperfection with rational Expectation

**Topic 7: Open Macroeconomic Theories**

* 1. National Income and Monetary Accounting
	2. Open Economy IS-LM-BP Model
	3. Capital Mobility and Economic Policy
		1. Immobile Capital and Fixed Exchange Rates
		2. Perfectly Mobile Capital and Fixed Exchange Rates
		3. Perfect Capital Mobility and Flexible Exchange Rates
	4. Extended Mundell-Fleming Model
	5. Comparative Static Effects
	6. Economic Policy and the World Economy
		1. Wage Rigidity and Economic policy
		2. International Policy Coordination

**Topic 8: Growth Models and Economic Growth Analysis**

* 1. Harrod-Domar model
	2. The neoclassical growth model
	3. Endogenous growth models.

**Topic 9: Unemployment**

* 1. The Generic Efficiency wages
	2. The Shapiro-Stieglitz model
	3. The Implicit Contracts
	4. Search Matching Model

**Topic 10: Macroeconomics Policies**

* 1. Inflation and Monetary Policy
	2. Budget Deficit and Fiscal Policy
1. **Mode of Delivery**

Being a graduate course, delivery will combine both lectures and seminars. Students will be required to select topics for which they present and write terms papers as well as having regular lectures on each topic. The specific teaching aids required are overhead projectors and white boards for presentation of material. The course shall carry a total of 3 credit hours. Each week students will devote a minimum of 3 contact hours to this course. In addition, the students shall also do some independent work, which will be 9 hours of work.

1. **Assessment Methods**

Assessment shall be by combination of a test, a term paper and two assignments. There will also be a final examination whose weight will be 50% of the total assessment. The distribution of the rest of the 50 percent of the continuous assessment shall be, 20 percent for test and assignments and 30 percent for term paper. The timing of each assessment is left to the individual lecturer so as to maintain some flexibility.

1. **Course Materials**

**Recommended Textbooks**

* Romer, D. (2006), *Advanced Macroeconomics*, 3rd Ed. New York: McGraw Hill. \*
* B. J. Heijdra & F. van der Ploeg, (), Foundations of Modern Macroeconomics
* Branson, William H. (1989) *Macroeconomic Theory and Policy*, 3rd Harper & Row, Publishers, New York, Chaps 2, 3, 4 and 5\*.
* Jones, Charles I. *Introduction to Economic Growth*

**Further Readings**

- A. Hanson (1953) *A Guide to Keynes,* New York: McGraw- Hill.

- A.C Pigou (1943)’ The Classical Stationary State ‘ *Economic Journal*, 53, December\*

- Adepoju, A. (Ed.). *The Impact of Structural Adjustment on the Population of Africa.* London: Great Britain by Villiers Publications. 1993.

- Agenor, Paul and P.J. Montiel (2000), *Development Macroeconomics*, Princeton University Press.

- Agenor, P-R. (1990) “Stabilisation Policies in Developing Countries with a Parallel Market for Foreign Exchange: A Formal Framework” *IMF Staff Papers*, September.

- Aghion, P. and P. Howitt, *Endogenous Growth Theory*. Cambridge: MIT Press.

- Alberto Arce (2003): ‘Value Contestations in Development Interventions: Community Development and Sustainable Livelihoods approaches’, *Community Development Journal* 38: 199-212

- Alchian, A. (1955) “The Rate of Interest, Fisher’s rate of return over Costs and Keynes’ Internal Rate of Return” *American Economic Review*, December\*

**Econ 531: Advanced Econometrics Theory and Application**

**Classification:** Common **Number of Credits:** 4

1. **Course Description**

Social scientists are often interested in quantifying relationships between different variables. The objective of Econometrics is thus to quantify such relationships using available data and statistical techniques to interpret and use the resulting outcomes. So, Econometrics is the application of statistical and mathematical methods to the analysis of economic data, with the purpose of giving empirical content to economic theories and then verifying or refuting them. Bridging the gap between theory and policy analysis requires acquiring the practice of applying the concepts, theories and methods of Economics to policy analysis. This Econometrics course is designed to meet this challenge by providing insights on how the three elements of Econometrics namely: economic theory, mathematical economics and statistical procedures can be combined, to provide useful information to policy analysts and decision makers. In addition, the course will give insight the application of software packages like STATA, EVIEWS and PCGIVE.

1. **Course Objectives**

The objective of the course is to equip students with the knowledge and skill of econometrics and able to read, analyze and conduct empirical investigations in the field of economics. Therefore, the objectives of the course are to:

* Develop an understanding of the theory and application of Econometrics to quantifying economic relationships and testing economic theories;
* Enable students to translate results from econometric analysis based on economic principles into useful and reliable policy reasoning;
* Equip students to read, evaluate and understand empirical papers in professional journals; and
* Provide students with practical experience of using econometric computer software to fit economic models.
1. **Expected Learning Outcomes**

By the end of the course students should:

* Have a solid understanding of the classical regression model, its underlying assumptions and the consequences of violating them;
* Understand how to specify an econometric model and conduct the necessary diagnostic and specification tests;
* Be able to conduct their own empirical investigations and critically evaluate econometric and other statistical evidence; and
* Understand econometric literature addressing economic issues in the region and be able to critically review their methodology and interpretation of results
* Understand the Discrete Analysis, Time Series Analysis and Panel Data Analysis with software application.
1. **Course Content**

**Topic 1: Introduction**

* 1. Introduction about Econometrics
	2. Linear Regression Models
		1. Ordinary Least Squares as
		2. Small Sample Properties of the OLS Estimator
		3. Goodness-of-fit
		4. Hypothesis Testing
		5. Asymptotic Properties of the OLS Estimator
	3. Model Specification
		1. Selecting the Set of Regressors
		2. Mis-specifying the Functional Form

**Topic 2: Problems of Measurement, specification, estimation and their Solutions**

* 1. Multicollnerity
	2. Heteroskedasticity
	3. Autocorrelation
	4. Model Specification Errors
	5. Distributed lag models and Expectations

**Topic 3: Discrete Choice Model**

* 1. Dummy variables
	2. Binary Choice Models
	3. Multi-response Models
	4. Binary and multinomial choice models: Probit and Logit models
	5. Truncated variables: The Tobit model

**Topic 4: Simultaneous Equations Models**

* 1. Endogenous and exogenous variables
	2. The identification problem: Necessary and sufficient conditions for identification
	3. Estimation of simultaneous equations (two Stage Estimation Methods)
	4. Exogeneity and Causality
	5. Endogneity and Instrumental Variables
	6. Recursive models

**Topic 5: Time Series Analysis**

* 1. Some time series models: AR and MA
	2. Stationary versus non-stationary time series, spurious regression
	3. Testing for non-stationary time series: Unit root test (Dickey-Fuller test)
	4. The Box-Jenkins approach and ARMA, ARIMA and SARIMA
	5. Predicting with ARMA Models
	6. Autoregressive Conditional Heteroskedasticity
	7. Dynamic Models with Stationary Variables
	8. Models with Non-stationary Variables
	9. Vector Autoregressive Models
	10. Co-integration and error-correction models (Engle-Granger test)

 **Topic 6: Analysis of Panel Data**

* 1. Introduction to Panel Data Modeling
	2. The Static Linear Model
	3. Dynamic Linear Models
	4. Panel Time Series
	5. Models with Limited Dependent Variables
1. Incomplete Panels and Selection Bias
2. **Mode of Delivery**

The course aims to balance theory and hands-on experience while working with economic data. As such, the lectures will emphasize the practical uses of econometric theory, and students will have ample opportunity to put this to use in computer-based assignments, including a project paper. In addition, students will select articles of their choice from professional journals for critical review and presentation in class as a basis for discussion regarding application of econometrics in analysis of economic problems.

* **Lectures (Theory)**

There will be 4 lectures per week each lasting for 60 minutes. Students will be expected to undertake 3 hours of independent study for every 1 contact hour.

* **Practical Classes**

There will be 2 hour of practical class per week. Each practical class will be preceded by a computer tutorial where the relevant commands for performing that week’s exercise will be introduced. The course instructor will identify relevant data sets (cross-section and time-series) for use in the practical classes: the textbook by Greene contains data sets and examples (including computer codes). Each student will subject his/her data set to various econometric tests and write a report.

* **Computer Tutorials** (SPSS, STATA, EVIEWS, R)

As the course involves a considerable amount of computing, students will have to learn and use selected econometric software packages. Three econometric software packages that are highly recommended are SPSS, EVIEW, and STATA. The recommended packages are widely used and are window based thus reducing the amount of programming until the user acquires sufficient experience.

1. **Assessment Methods**

The assessment criteria and their respective weights will be as follows:

* Written Continuous Assessment Tests at least two tests 20%
* Written Practical Tests/Term Paper 30%
* Written Final Examination 50%
1. **Course Materials**

**Recommended Textbooks**

* Verbeek, M. (2008). **A Guide to Modern Econometrics** (3nd ed.). John Wiley and Sons Ltd.
* *Wooldridge ()* **Introductory Econometrics***; 2nd ed.*
* Damodar Gujarati, (2001), **Basic Econometrics**, Mc-Graw Hill, Tokyo
* Greene, William, H .(2000)**Econometric****Analysis**(Fourth Edition), Prentice Hall International.

**Further Readings**

* \_\_\_, 1996, “Education returns across Quantiles of the wage function; alternative explanations for returns to education in South Africa,” American Economics Review, 86, 335- 39.
* Aboagye A.Q and Kisan Gunjal. 2000. An Analysis of Short-Run Response of Export and Domestic Agriculture in Sub-Saharan Africa. Agricultural Economics 23 (1), 41-53.
* Ainsworth, Martha, and Juan Mñoz, 1986, The Côte d’Ivoìre living standards study, LSMS Working Paper 26, Washington, D.C. World Bank.
* Alderman, Harold. 1993. “International Price Transmittal: Analysis of Food Markets in Ghana.” Oxford Bulletin of Economics and Statistics 55: 43-64.
* Barrett C.B. 1999. The Effect of Real Exchange Rate Depreciation on Stochastic Producer Prices in Low-Income Agriculture. Agricultural Economics 9 20 (3), 215-230.
* Barrett, C.B. 1997. Liberalization and Food Price Distributions ARCH-M Evidence from Madagascar. Food Policy 22 (2), 155-173.

**Econ 532: Research Methods for Economists**

**Classification:** Common **Number of Credits: 2**

**Course Description**

 This course explores the process of designing, implementing, disseminating and analyzing the results of economic data. This course is about processes of obtaining, analyzing, interpreting and reporting reliable data of the real world. It aims to encourage students to appreciate their responsibilities to society and the scientific community as researchers. Students need to be well versed in the ‘real life’ issues, which have to be decided in setting up and managing research projects and how research can be used in development work. Students need to be able to balance their academic requirements with the needs of projects and development participants. They need the skills and adaptability to work in interdisciplinary teams and to understand what is required for their specific discipline and the broader requirement. The course covers introduction to research, research process, measurement scale, sampling and data collection, data analysis and interpretation, conducting participatory research as well as the writing of research report and documentation.

1. **Course Objectives**
* To understand the fundamentals of research concepts
* To be familiar with different types of research design
* To become familiar with major research methods
* To gain knowledge of processing and analysis of data for inferences
* To impact the skill of preparing scientific proposal and writing scientific researches
1. **Expected Learning Outcomes**

At the end of the course, students will be expected to understand that every research project should ask and answer the following questions: What is the problem/issue? Why is it important? How am I proposing to examine it? Why is this approach appropriate? How is it grounded in the literature, and what does it add to the literature? What did I expect to find/learn- i.e., my hypotheses/expectations? What did I actually learn? Why is what I learned important i.e. what are the implications for further research or for policy? Specifically, the student will:

* Acquire an understanding of the role of effective research;
* Be able to explain systematically and illustrate essential components of the research process;
* Develop skills in a range of research tools (qualitative and quantitative)
* Have a thorough grounding in the scientific approach to research;
* Appreciate the advantages, limitations and complementarily of different research approaches and methods according to context, purpose of research and type of data required;
* Apply quantitative and qualitative data analysis techniques used to organize data into some meaningful form;
* Be exposed to important components of the process of research management; and
* Be able to undertake a postgraduate research project for their thesis.
1. **Course Content**

**Topic 1: Introduction**

* Research: types, criteria of good research, limitations & ethical issues in social research. Scientific Research Methods, Approach and Designs (The case study, The longitudinal study, The comparison, The longitudinal comparison, The experiment, Controlling for influence in social science research)

**Topic 2: Research Process**

* Steps, Problem discovery and formulation, research proposal, Research Modeling- Hypothesis: Types, Formulation of Hypothesis, Errors in hypothesis testing, Parametric and Nonparametric tests.

**Topic 3: Measurement in Research**

* Measurement & Scaling Techniques, Scale Properties, Criteria for good measurement; Likert’s Scale, Semantic Differential Scale, Thurstone-equal appearing interval scale, MDS – Multi Dimensional Scaling.

**Topic 4: Sampling & Data collection:**

* Principles of sampling design, Types of Sampling - Probability and Non-probability Sampling Techniques, Sample Size. Data collection: Source & Techniques. Goodness of Data: Reliability, Validity, Generalizability, Authenticity & Trustworthiness

**Topic 5: Data Analysis and Interpretation**

* **Analysis of Quantitative Data:** Factor analysis, Correlation, Regressions, analysis of Moderators and Moderators, t-test, ANOVA, MANOVA, Structural equation modeling and Meta analysis.
* **Analysis of Qualitative Data**: Interview Approach, grounded theory and Narrative analysis, observation method, case studies and ethnography, critical management research
* Principles of good report/thesis writing

**Topic 6: Special Topic: Conducting Participatory Research**

* The main ideas underlying RRA/PRA, PRA methods and techniques, Preparation for PRA, PRA Implementation, Participation in the Analysis Process, How much participation is appropriate, Issues in Participatory research

**Topics 7: Writing Research proposal, paper and Documentation**

* Research report writing, Steps in Report Writing- format of Research Report- documentation footnotes and Citation, references and plagiarism, Preparing a grant proposal and Some guidelines for disseminating results in different dissemination media
1. **Mode of Delivery**
* Lectures/study guide, Seminars, group discussion, proposal preparation and if possible filed trip

**Practical in data management, data analysis and reporting**

* Processing the data, Describing data distributions, Measuring Relationships between variables, Reporting the information – tabular and graphic, Reporting the information – power point presentations

**Seminars by visiting professionals (suggested topics)**

* Review of national statistical sources – agricultural surveys, CSA surveys, Ongoing Local or regional research project with particular focus on data collections tools, limitations of data and managing the data gathering and processing
1. **Assessment Methods**
* Continuous assessments (20%): At least three written assignments and tests that cover the essential components of the research process
* Project/Term paper/Reviewing of journals/preparation of proposals – 30%
* Final Examination (50%) – which course the whole course content
1. **Course Materials**

**Recommended Textbooks**

* + Kothari, C.R. (1994) Research Methodology: Methods and Techniques, 2nd ed., Wishwa Prakashan, New Delhi.
	+ Dasgupta, A.K (1968a). Methodology of Economic Research. N. Sinha Institute.
	+ Alreck, P.L. and Settle R.B 2004. *The Survey Research Handbook.* Irwin Hill. Third Edition.
	+ Sophie Laws. 2003 *Research for Rural Development: A Practical Guide*. Sage Publications.

**Further Readings**

* + Anandajayasekeran J. B. and Matata, K. et al Farming Systems Approach: A Handbook for East and Southern Africa
	+ Babbies, E. 1989, The Practice of Social Research. Wadsworth Publishing Company
	+ Bulmer M and D.P. Warwick Eds. Social Research in Developing Countries
	+ Bulmer, M. 1982. The Use of Social Research: Social Investigation in Public Policy Making. London: George Allen and Unwin
	+ Casley, D.J and Lury, D.A 1993. Data Collection in Developing Countries. Oxford University Press.
	+ Chambers, Robert 1992, Principles Methods and Discoveries of PRA. In: Rural Appraisal: Rapid Relaxed and Participatory, Institute of Development Studies Discussion Paper No 311.

**Econ 621: Development Economics I**

**Classification: Core Credit Hours: 3**

**Course Description**

The course focuses on the macroeconomic aspects of development. Topics to be considered include: contemporary and historic features of development; economics of growth and its application to developing economies; growth and inequality; structural change; the role of the state; institutional determinants of development and governance; structural adjustments, and other relevant topics. The course will pay particular attention to the policy implications from each of the topics covered here with special emphasis on how they relate to Sub-Saharan Africa in general and Ethiopia in particular.

1. **Course Objective**

The objective of this course is to provide some of the basic skills to analyse issues related to economic development. The course is designed to deal with issues and problems facing under-developed countries. It aims to develop the ability of students to critically evaluate alternative theories and models of economic growth and development and their applications to less-developed countries. Moreover, the course will enable students to acquire enough knowledge to discuss the problems that developing nations face, assess the seriousness of these problems, and evaluate the effectiveness of various policies designed to deal with the issues.

1. **Course Content**

**Topic I: An Overview of Economic Development**

* Why study economic development – evolution of development economics – measuring economic growth and development – income distribution in developing countries – the many faces of underdevelopment – some structural features of developing countries – development in historical perspective – patterns of economic development in Africa.

**Topic II: Theories of Economic Growth**

* Classical growth theory – the Harrod-Domar growth model – neoclassical growth theory – ‘new’ (endogenous) growth theory and the macro determinants of growth, Growth miracles: East Asia, China, and India.

**Topic III: Approaches to Development**

* The theory of big push – balanced growth – unbalanced growth – stages of growth theory – structure of a dual economy: Lewis model – structural change and patterns of development – the Latin American structuralists – dependency analysis – classical Marxism – New Structural Economics.

**Topic IV: Economic Inequality and Growth**

* Concept of inequality – economic inequality – inequality and income – inverted-U shape hypothesis – inequality and saving – inequality and political redistribution – inequality and capital market – inequality and human capital formation.

**Topic V: Structural and Sectoral Issues**

* Structural change and development – the role of agriculture in economic development – some theoretical aspects of agricultural policies – new technology and sustainable agriculture – a perspective on the green revolution – political economy of land reform – agrarian transition – globalization and agricultural growth. Rationale and pattern of industrialization in developing countries – the choice of techniques – agriculture-industry interrelationships in the development process – A model of the complementarity between agriculture and industry – resource based industrialization. Rethinking African development.

**Topic VI**:  **The International Debt Crisis and Structural Adjustment**

* The evolving debt position of the developing world – why do developing countries become indebted – Origins of the 1970s–1980s external debt dilemma – The debt service obligation: the real cost of debt repayment – debt forgiveness – debt buybacks and debt swaps – Longer-term efforts to overcome the debt crisis. Structural adjustment and stabilization policies – structural adjustment programme and its impact on industrialization – sub-Saharan African countries experience with structural adjustment programmes.

**Topic VII: The Institutional Aspect**

* The role of the state in less developed countries – institutions and economic development – public finance – political economy and misgovernance – rent seeking and government failure – governance reform – corruption and growth – conflict and development policy.
1. **Modes of Delivery:**

 The course will be delivered through lectures, Term Papers, individual and group assignments.

1. **Modes of Assessment**
* Written exam which covered all portions. Exam questions could be essay type, workout, multiple choices and others depending on the teaching approach and materials provided to students (50%)
* Case study assignment at individual and group Level (20%)
* Term Paper and Presentation (30%)
1. **References/Textbooks**

Apart from the following textbooks, the course will draw on seminal and recent journal articles giving varied perspectives.

**Essential Reading**

* Thirlwall, A. P. (2006). Growth and Development, 8th ed., Palgrave Macmillan.
* Ray, D. (1999). Development Economics, Oxford University Press.
* Cypher, J. M. and J. L. Dietz (2009). The Process of Economic Development, 3rd ed., Routledge.
* Chang, Ha-Joon (Ed.) (2003). Rethinking Development Economics, Anthem Press.

**Additional Reading**

* Basu, Kaushik (1998). Analytical Development Economics, Oxford University Press.
* Chang, Ha-Joon (2002). Kicking Away the Ladder: Development Strategy in Historical Perspective, Anthem Press.
* Collier, Paul, et al. (2003). Breaking The Conflict Trap: Civil War and Development Policy, World Bank.
* Collier, Paul (2007). The Bottom Billion, Oxford University Press.
* Dessalegn Rahmato (2009). The Peasant and the State, Addis Ababa University Press.
* Eshetu Chole (2004). Underdevelopment in Ethiopia, OSSREA.
* Ghatak, Subrata (2003). Introduction to Development Economics, Routledge.
* Handbook of Development Economics, Vol. I to V, Elsevier.
* Hayami, Y. and Y. Godo (2005) Development Economics: From the Poverty to the Wealth of Nations, 3rd ed., Oxford University Press.
* Jones, C. I. (2006). Introduction to Economic Growth, 2nd ed., Viva Books.

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* Kohli, Atul (2004). State-Directed Development, Cambridge University Press.
* Meier, G. M. and James E. R. (2005). Leading Issues in Economic Development, 8th ed., Oxford University Press.
* Mkandawire, T. and C. C. Soludo (1998). Our Continent Our Future, Africa World Press.
* Sundaram,Jomo K. and Ben Fine (Eds.) (2006). The New Development Economics, Tulika Books.
* Sundaram,Jomo K. and Erik S. R. (Eds.) (2005). The Origins of Development Economics, Tulika Books.
* Weiss, John (2002). Industrialisation and Globalisation, Routledge.

**Econ 522: Development Economics II**

**Classification: Core Credit Hours: 3**

**Course Description**

This course focuses on the microeconomic aspects of development from a policy-oriented perspective. Topics to be considered include: capital and credit markets, labour markets, poverty, population, health and education, rural-urban interaction, and randomized trials in development economics. The issues will be discussed keeping in mind the African context.

1. **Course Objectives**

The principal aim of this course is to provide students with a thorough understanding of microeconomic models applied to a wide range of issues of development in less developed countries. The course will introduce students to some of the dominant problems faced by developing countries such as poverty, low levels of human capital, urbanization, and rural transformation and various policies to resolve them.

1. **Prerequisite: Econ 521**
2. **Course outline**

**Topic I: Poverty and under nutrition**

* Conceptual issues – measurement issues. The functional impact of poverty: poverty, credit, and insurance poverty, nutrition, and labour markets – poverty and household allocation of resources.

**Topic II: Population Growth in Economic Development**

* Some basic issues – the demographic transition – is fertility too high – economic theories of population growth – some negative and positive effects of population growth.

**Topic III: Rural - Urban Interaction**

* Structure of rural and urban economy – formal and informal sectors – Rural and urban interaction – Lewis model – Rural-Urban migration: Harris and Todaro model – government policy.

**Topic IV: Health and education**

* Contribution of health and education to economic growth – health and education as joint investment – poverty traps and returns to health – returns to education – health and schooling investments in Africa – government Intervention in health and education

**Topic V: Markets Related to Agriculture**

* Land market– land and rental contracts – contracts and production incentives – land size and productivity – land reform and land tenure. Labour market – permanent labour markets. Credit market – features of rural credit market – interlinked transactions in rural markets – alternative credit policies. Market for insurance – the perfect insurance model – limits to insurance.

**Topic VI: Industrialization and Trade Policies:**

* Globalization and the dilemmas of development – economic openness and industrialization – terms of trade between developed and developing countries – import-substituting industrialization and the infant industry argument – export promotion – foreign exchange constraints and growth – trade liberalization and industrialization – regional co-operation among less developed countries – foreign contact and technology transfer.

**Topic VII: Empirical Development Economics**

* The aim of this section is to familiarize the students with the randomized trials in development economics. The section would cover the structure and methodology of randomized trails as well as discusses the limitations of field experiments.
1. **Modes of Delivery:**

 The course will be delivered through lectures, Term Papers, individual and group assignments.

1. **Modes of Assessment**
* Written exam which covered all portions. Exam questions could be essay type, workout, multiple choices and others depending on the teaching approach and materials provided to students (50%)
* Case study assignment at individual and group Level (20%)
* Term Paper and Presentation (30%)
* Final Exam (50%)
1. **References/Textbooks**

Apart from the following textbooks, the course will draw on seminal and recent journal articles giving varied perspectives.

**Essential Reading**

* Ray, D. (1999). Development Economics, Oxford University Press.
* Basu, Kaushik (1998). Analytical Development Economics, Oxford University Press.
* Bardhan, Pranab and Christopher Udry (1999). Development Microeconomics, Oxford University Press.

**Additional Reading**

* Banerjee, Abhijit, et al. (2006). Understanding Poverty, Oxford University Press.
* Banerjee, Abhijit and Esther Duflo (2011). Poor Economics, Random House.
* Dessalegn Rahmato (2009). The Peasant and the State, Addis Ababa University Press.
* Handbook of Development Economics, Vol. I to V, Elsevier.
* Hayami, Y. and Y. Godo (2005) Development Economics: From the Poverty to the Wealth of Nations, 3rd ed., Oxford University Press.
* Meier, G. M. and James E. R. (2005). Leading Issues in Economic Development, 8th ed., Oxford University Press.
* Thirlwall, A. P. (2006). Growth and Development, 8th ed., Palgrave Macmillan.

**Econ 523: International Trade, Finance and Development**

1. **Course Description**

Several aspects of international trade policy and finance are examined in the course, including its economic rationale and the policy instruments used. The first half of the course will provide analysis of main trade theories and policies. It includes topics such as pure theories of international trade, the political economy of international trade and various trade policies and their effects on economic growth and development. The emphasis is on both technical and institutional issues.

The second half of the course deals with international finance and balance of payments adjustment. It covers topics such as open-economy macroeconomics, including the determination of the exchange rate and the consequences of capital mobility, the historical and institutional context within which international financial flows occur and finally, the issue of financial liberalization and its effects on developing countries.

1. **Course Objective**

The aim of this course is to develop critical understanding of international trade and finance theory and their policy implications for growth and development. It looks at both conventional theories and empirical analyses, as well as historical trends and positions topical current issues in a solid theoretical and historical framework. Upon the completion of this course students will:

* have a good understanding of trade theories, international trade policies, and their consequences on many issues in developing countries.
* understand the theoretical arguments for and against financial globalization and be able to evaluate the impact of international finance on the growth and broader development goals of less developed countries.
1. **Course Content**

**Part A – International Trade**

**Topic 1: Theories of international trade**

* Why do countries trade, what determines the patterns of trade, what are the gains and implications of trade?
* Ricardian comparative advantage and other classical models
* Heckscher-Ohlin-Samuelson factor endowment based models
* Linder’s demand similarity hypothesis
* Imperfect competition models, models relating to intra-industry trade
* Theories of strategic trade policy

**Topic 2: The political economy of international trade**

* The historical evolution of trading patterns and the current institutional context of trade
* The emergence of the international division of labour in the mid 20th century
* Trade patterns of the past two decades
* GATT and the WTO
* Preferential trade agreements
* Political arguments for free trade, free trade and efficiency
* International investment and trade

**Topic 3: Trade policies for development**

* The theoretical and empirical basis for trade and industrialisation policies of developing countries, and the current constraints.
* Trade and growth
* Theories of tariff protection, infant industry protection and dynamic comparative advantage
* The partial and general equilibrium analysis of tariffs
* Other instruments of trade policy
* The experience of developing countries with trade openness
* Current constraints and emerging issues for developing countries in the period of globalisation

**Part B: International Finance**

**Topic 4: Open economy macroeconomics**

* The implications of openness for macro-economic performance and policy.
* Approaches to balance of payments adjustment: the Keynesian and Monetarist approaches
* Implications of capital flows, Mundell-Fleming and subsequent models
* Theories of exchange rate determination: Purchasing Power Parity, asset market model, etc.

**Topic 5: The historical and institutional context**

* The Gold Standard regime – Theoretical explanations and actual patterns
* The interwar period of international financial instability
* The Bretton Woods regime
* Post-Bretton Woods arrangements, including the current role of the IMF and World Bank, and the current structure of international financial markets

**Topic 6: Financial liberalization and its effects**

* Financial policies for developing countries
* Imperfections in international financial markets
* The elements of financial liberalisation
* Monetary integration and its consequences
* Issues in international financial architecture
* The development project in a world of mobile finance

**Reference:**

**Books**

Bond, Patrick (2006). *Looting Africa: The Economics of Exploitation*, Zed Books.

*Handbook of International Economics*, Vol. I, II and III

Hoekman, B., et al. (eds.) (2002). *Development, Trade and the WTO: A Handbook*,

 World Bank.

Hoekman, B. and Kostecki, M. (2009). *The Political Economy of the World Trading*

 *System*: The WTO and Beyond, Oxford: Oxford University Press.

Krugman, P. R., Obstfeld, M. and Melitz, M. J. (2012). *International economics,*

 *theory and policy*, Addison-Wesley.

Levi, M. D. (2005). International Finance, Routledge.

Markusen, James R. et al (1995). *International Trade: Theory and Evidence*,

 McGraw-Hill.

Obstfeld, M. and Rogoff, K. (1996). *Foundations of International Macroeconomics*,

 MIT Press.

Thirlwall, A. P. and Pacheco-López, Penélope (2008). *Trade Liberalisation and the*

 *Poverty of Nations*, Edward Elgar.

 **Articles**

Arestis, Philip (2005). *Washington Consensus and Financial Liberalization*, Journal

 of Post-Keynesian Economics, Winter 2004-05, Vol. 27 No. 2.

Kaminsky, Graciela Laura and Sergio L. Schmukler (2003), *Short-Run Pain, Long-*

 *Run Gain: The Effects of Financial Liberalization*, IMF Working Paper

 No.WP/03/34, February.

Prasad Eswar, Kenneth Rogoff, Shang-Jin Wei and M. Ayhan Kose (2003). *Effects of*

*Financial Globalization on Developing Countries: Some Empirical Evidence*, International Monetary Fund.

Singh, Ajit (1997). *Financial Liberalisation, Stockmarkets and Economic*

 *Development*, Economic Journal, Vol. 107 Issue 442.

**Annual Reports**

UNCTAD: Trade and Development Report

UNCTAD: World Investment Report

UNCTAD: The Least Development Countries Report

World Bank: Global Financial Development

**Econ 541: Institutional Economics**

**Classification:** Common **Number of Credits: 3**

**Course Objectives**

The general purpose of the course is to enable students understand how institutions are emerged and interaction among economic agents affected by them. The specific objectives are as follows:

* To equip the students with basic concept of institution and various theories in dealing with economic problems related to natural resource and environment;
* To assist the students to apply economics tools for analysis of institutions; and
* To provide a framework for enabling the students to see broader perspectives apart from Neoclassical economics concerning deriving force for actions of economic agents and means of maximizing their incentives.
1. **Expected Learning Outcomes**

At the end of the course, the student will be able to:

* Explain basic concepts of institutions and institutional economics and compare and contrast the Neoclassical Economics and New Institutional Economics
* Compare the different theories of institutional change with specific reference to their origin , focus and applicability;
* Explain alternative frameworks of institutional and be familiar with the use of game theory as a tool in institutional analysis;
* Clarify the theories of property rights and how property rights influence economic activities ; and
* Discuss transaction costs and link between transaction cost and contract
1. **Course content**

**Topic 1: Basic Concepts of Institutions and Institutional Economics**

 1.1. Basic concepts: definition, classification, functions of institutions

* 1. .The need for non-market institutions
	2. .Institutionalism ancient, old, and new

1.4 .Understanding the relationship between institutions and economic development

**Topic 2: Informal Norms and Formal Laws**

* 1. Social Capital and Collective Action, Theories and Practices

-The Concept of Social Capital

-Theories of Collective Actions

-The role Social Capital in Collective actions (case examples)

-Other Determinants of Collective Action (case example)

* 1. The rule of law, legal traditions, and economic growth
	2. Property, politics, and development trajectories
	3. Property rights and institutional change
	4. The interrelationship between legal and economic processes

**Topic 3: Transaction Cost Economics**

3.1. Neoclassical economics Vs Transaction cost Economics

3.2. What transaction costs are and reasons for their existence(opportunism. Moral hazard, information asymmetry and Principal agent theory)

3.3. Classification of Transaction Costs

3.4. Determinants of Transaction Costs

3.5. Measuring Transaction Costs

3.6. Transaction costs and Contracts

 -Contract as Absolute Property Right

 -Bounded Rationality and Contractual Incompleteness

 -The Role of Contracts in Minimizing Transaction Costs (an Example)

**Topic 4: Evolution of Particular Institutions**

* 1. Efficient and inefficient institutions
	2. Institutions and Political Economy
	3. Modern bureaucracy
	4. The Performance and Stability of Federalism: An Institutional Perspective
	5. Corporate governance, innovative enterprise, and economic development

**Topic 5: “New” Institutional Economics**

* 1. The problem of social cost and externalities
	2. Transaction cost analysis
	3. Theory of property rights
	4. Theory of Contracts

**Topic 6: Markets, Firms and State**

* 1. Market as organization
	2. Market organization as a result of market cooperation
	3. Incentive and limits to integrate
	4. Institutional models in the tradition of the neoclassical theory of the State
	5. Role of political institutions

**Unit 7: Institutional Change**

* 1. Nature of Institutional change (spontaneous Vs non spontaneous emergence)
	2. Theories of Institutional Change (The efficiency theory, Distributive bargaining theory and Political-economy theory)
	3. Regulation in a dynamic setting
	4. Regulating natural resources
	5. The politics of institutional change in a representative democracy
	6. State failure in weak states
	7. Rational individuals versus social dilemmas

**Topic 8: Institutional Performance and Economic Development**

* 1. Institutional Explanations of Underdevelopment
	2. Institution that Support Development
	3. Institution and Economics on Foreign Aid

**Unit 9: Some Country Experiences**

* 1. State formation and the construction of institutions for the first industrial nation
	2. Development strategies and institutions in Taiwan and China
	3. Institutional innovation in Brazil
	4. Developmental nationalism and economic performance in Africa
1. **Modes of Delivery**

Being a graduate course, delivery will combine both lectures and seminars. Students will be required to select topics for which they present and write terms papers as well as having regular lectures on each topic. The specific teaching aids required are overhead projectors and white boards for presentation of material. The course shall carry a total of 3 credit hours. Each week students will devote a minimum of 3 contact hours to this course. In addition, the students shall also do some independent work, which will be 9 hours of work.

1. **Assessment Methods**

This will be through assignments & mid-term test (20%), term paper (30%) and final examination (50%).

1. **Course Materials**
2. **References**

Chang, Ha-Joon (ed.) (2007). *Institutional Change and Economic Development*, United Nations University Press.

Eggertson Thr. (1990) .Institutions and Economic Behavior. Cambridge, Cambridge University Press.

Furubotn E., Richter R.( 1997) Institutions and Economic Theory. Ann Arbor. The University of Vichigan Press.

Hariss, J., Hunter, J. and Lewis, C.M. (eds.) (1995). *The New Institutional Economic and Third World Development*, Routledge.

Нart O. Firms(1995) Contracts and Financial Structure. Oxford,Clarendon Press Ménard, Claude and Shirley, Mary M. (eds.) (2008). *Handbook of New Institutional economics*, Springer.

Milgrom P., Roberts J.( 1992) Economics, Organization and Management. – Prentice-Hall Int.

North, D. (1990). *Institutions, Institutional Change and Economic Performance*, Cambridge University Press.

Odintsova(2008) M.I. Institutional economics. Textbook. Moscow, SU-HSE

Rutherford, Malcolm (1994). *Institutions in economics: The old and the new institutionalism*, Cambridge University Press.

Williamson O. (1985) The Economic Institutions of Capitalism. The Free Press, N.Y.

Williamson, O.(2008 )Transaction Cost Economics.In:C.Menrad and M.M. Shirley(eds) Handbook of New Institutional Economics, Springer Verlag:Berln

**Further Readings Material**

* Bardhan,Pranab(1989).The Institutional Economics and Development Theory:A Brief Critical Assessment.World Development17(9),1389-1395.
* Eggersson,Thrainn(1997).The Old Theory of Economic Policy and the New Institutionalism. *World Development 25(8),* 1187-1203
* Knight, Jack(1992).*Institutions and Social Conflict.* Cambridge: Cambridge University Press
* Schmid,A.(2004).Conflict and Cooperation: Institutional and Behavioral Economics. Blackwell Publishing
* Smith H.E.(2002).Exclusion Vs Governance:Two Strategies of Delineating Property Rights, Journal of Legal Studies, vol 31
* Scott,A.(2008).The Evolution of Property Rights. Oxford University Press.
* Ostrom, Elinor(1990).*Governing the Commons:The Evolution of Institutions for Collective Action.Cambridge: Cambridge University Press.*
* Aggrawal, A.(2001) Common Property Institutions and Sustainable Governance of Resources.World Deveopment, 29(10) 1649-1672.
* Bolton,G.E, and Ockenfels,A.(2000). A theory of equity, reciprocity, and Competition.*American Economic Review* 90,166-93.
* McCann, L.,Colby, B.,Easter,K.W.,Kastrine, A.,Kuperan, K.V.(2005).Transaction Cost Measurement of Environmental Policies. Ecological Economics 52:527-542
* Shirley, M.M. (2008).Institutions and Development, Edwards Edgar, Cheltenham, UK,NorthamptonmMA,USA
* Norht, Douglas(1989).Institution and Economic Growth: A Historical Introduction, *World Development* 17(9),1319-1332.

**Econ 651: Economics of Agriculture and Rural Development**

**Classification:** Elective **Credit Hour: 3**

**Course Description**

Most of the world’s poor still live in rural areas and whilst poverty in the world’s growing cities is a major problem, a large proportion of the urban poor are migrants from rural areas. This course is about progress and change in the rural areas of developing countries. It is concerned with the factors driving rural change, how we define progress, and what can be done to bring about the overriding objective of rural development, which is to reduce, and eventually eliminate poverty. This course examines the importance of agriculture and its general role for economic development in developing countries. In addition, it also examines the concepts, theories and strategies of rural development.

It examines the role of rural finance, rural infrastructure, cooperatives, agricultural research and extension, climate change adaptation and mitigation mechanisms for agricultural and rural development.

1. **Objectives and learning outcomes of the course**

On completing this course, students will be able to:

* Recognize and explain key concepts, ideas and debates in rural development and outline the main opportunities and constraints relating to the development of rural economies and the reduction of rural poverty
* critically evaluate the contribution of different sectors, policies, services, and actors to the process of rural development
* outline and discuss current debates regarding the roles of markets, the state, institutions, property rights, agriculture and the rural non-farm economy critically evaluate past and existing attempts to supply rural services, such as infrastructure, finance, research and extension
* analyze alternative policy options in terms of their potential impact on rural poverty
1. **Course Content**

**Topic I: Introduction**

Meaning and basic concepts of agriculture and rural development, trends in agricultural growth, regional variations in growth of output and productivity, Impact of globalization on agriculture Diversification of Rural Economic Activities: Livestock economies - Livestock resources and their productivity; White revolution; Fishery and poultry development; Forestry, Horticulture and floriculture; Issues and problems in rural industrialization and development of agro-based industries, rural non-farm sector economy (RNFE), Inter sectoral relationships, maximization of the beneficial effects on rural income and employment levels)

**Topic II: Agricultural Development**

Distinctive features of the agricultural sector in developing countries, the role of agriculture in economic development, strategies for agricultural development, the role of technological innovation and population growth, food security, resource scarcity and population challenges, Farm size and productivity, Agricultural marketing, Models of agrarian household behavior, land property rights and policy and Women Empowerment in Agriculture

**Topic III: Rural infrastructure**

The importance of Roads and transport to access markets and essential services, performance of infrastructural sector in rural areas, the role of infrastructure for rural development, communication infrastructure

**Topic IV: Rural finance**

The role of finance in rural development and the challenges involved in providing sustainable financial services to the rural poor, types of financial services and the factors influencing supply and demand in rural credit markets and the problems facing borrowers and lenders, and Rural credit policy

**Topic V** **Co-operatives:**

The concepts, basics, history of co-operatives as well as the operational patterns of co-operatives in developed and developing countries and the connections to the global co-operative organizations, The role of co-operatives in agricultural, rural and sustainable development and the way co-operatives respond to the question of poverty alleviation, The challenges and solutions from the point of view of the informal and formal types of co-operatives in the developing and developed countries, The key-issues connected to sustainable development and the challenges to co-operatives as regards community development, poverty alleviation and the process of peace - building in developing countries

**Topic VI: Climate Change and Sustainability – Mitigation and Adaptation**

Effects of Climate Change on developing country agriculture, Climate friendly landscape strategies, Environmental benefits from agriculture (agricultural landscape, biodiversity, and traditional species), The Economics of Ecosystems and Biodiversity, Characteristics of Traditional Agriculture and adaptive capacity

**Topic VII: Agricultural research and extension**

The role of agricultural research and extension in rural development, key characteristics, and the objectives, delivery, and financing of evolving research and extension approaches and systems, appropriate roles of public, private and other stakeholders in agricultural research and extension

**Topic VIII: Agriculture and Rural Development policy measures in Ethiopia and other developing countries**

1. **Modes of Delivery:**

 The course will be delivered through lectures, Term Papers, individual and group assignments.

1. **Modes of Assessment**
* Written exam which covered all portions. Exam questions could be essay type, workout, multiple choices and others depending on the teaching approach and materials provided to students (50%)
* Case study assignment at individual and group Level (20%)
* Term Paper and Presentation (30%)
* Final Exam (50%)
1. **References/Textbooks**
2. Gail L.C, C.W. Jensen and Douglas D. 1997. Agricultural Economics and Agribusiness. 7th Edition
3. Harold G. Halcrow. 1984. Agricultural Policy Analysis.
4. Holmberg, J. 1992. Making Development Sustainable. International Institute for Environment and Development
5. Rao, P.K. 2000. Sustainable Development. Economics and Policy. Black well publishers Inc.
6. Reports on the Ethiopian Economy. Ethiopian Economic Association (Different Volumes)
7. Thirlwall, A. P. 2003. Growth and Development: With special Reference to Developing Countries, 7th Ed. Pal grave: McMillan.
8. Todaro, M.P. and S.C. Smith 2003. Economic Development, 8th Edition. Pearson: Addison Wesley.
9. Todaro, P.T. 1992. Economics for Development world: An Introduction to Principles, Problems and Policies for Development, Long man.
10. Workneh Negatu, Legese Dadi and Abebe Haile Gebriel (eds) 2003. Agricultural Policy in Ethiopia's Economic Development: Scope, Issues and Prospects. Proceedings of the 6th Annual Conference of the Agricultural Economics Society of Ethiopia, 30-31 August, 2002, Addis Ababa, Ethiopia.

**References for Rural Development**

1. Katar Singh (1999), Rural Development: Principles, Policies and Management, 2nd Ed. Saga Publications, New Delhi
2. Frank Ellis (1992) agricultural policies in developing countries, Cambridge University Press, Cambridge
3. Yujiro Hayami, (1997) Development economics: From poverty to wealth of nations, Clarendon Press, Oxford
4. Hendrik Van Den Berg (2001), Economic Growth and Development, McGraw – Hill Higher Education
5. Michael P.Todaro (2000), Economic Development, Addison-Wesley, Amsterdam.
6. Meier, Gerald (1995), Leading issues in Economic development, Sixth edition, Oxford Univeristy press Oxford - New York

**Additional readings**

All development books are your additional reference but the following books will be very use full in specific chapters

1. Gopal Lal Jain (1997), Rural Development, Mangal Deep Publications Jaipur India.
2. Tom Tietenberg (2003), Environmental and natural resource economics, 6th ed., Pearson Education Inc.
3. Joseph E. Stiglitz (2001) “information and change in paradigm in economics”, Nobel prize lecture, December 8, 2001
4. Addisalem Belema (2003), Economic development and democracy in Ethiopia, Dissertation in Erasmus University, Rotterdam
5. Todaro, Chaelp (2000), Economic Development, fifth edition, Pearson education Limited Edinburgh Gate, Harlow –England
6. Hayami, Yujiro (1997), Development Economics, Oxford University press, Oxford - New York

**Econ 661: Project Design and Analysis**

**Classification: Elective Credit Hours: 3**

1. **Course Objectives**

The aim of the course is to provide the students with tools necessary for the appraisal of investment projects. The course will also familiarize the students with case studies which demonstrate the use of these techniques in practice.

1. **Prerequisite: None**
2. **Course Description**

**Topic I: Introduction**

* Project choice and national planning
* Generation and Screening of Project Ideas
* Technical Analysis of projects

**Topic II: Cost Benefit Analysis (CBA)**

* 1. **Introduction**
* The rationale of cost-benefit analysis (CBA): Value judgments and CBA, Criticisms of ‘conventional CBA’, Identification of benefits and costs
* The welfare foundations of cost-benefit analysis: Social appraisal in a World of identical consumers, Cardinal Utility and cost-benefit analysis, The compensation principle, Utility possibility curves and the potential welfare criteria , The social welfare function
	1. **Private Benefit-Cost Analysis:**
* **Financial Analysis:** Estimation of cost of projects, estimates of sales and production – cost of production – working capital requirement and its financing – estimates of working results – breakeven points – projected cash flow statement – projected balance sheet.
* **Appraisal criteria**: Net Present Value – benefit cost ratio – internal rate of returns – urgency – payback period – accounting rate of returns – investment appraisal in practice.
* **Project Financing:** Norms and policies of financial institutions – project appraisal by financial institutions. Menu of Financing: equity capital – internal accruals – term loans – bonds – working capital advance – raising capital in international markets, Project contracts.
	1. **Social Cost Benefit Analysis (SCBA)**
* Efficiency Benefit-Cost Analysis
* Consumer and Producer Surplus in Benefit-Cost Analysis
* Valuing Traded and Non-traded Commodities in Benefit-Cost Analysis: Valuation of traded goods, Valuation of non-traded goods, Valuation of non-traded in variable supply, Valuation of non-traded in fixed supply, shadow pricing (Shadow pricing of foreign exchange, Shadow pricing of labor, Shadow pricing of capital)
* The Social Discount Rate, Cost of Public Funds, and the Value of Information
* Weighting Net Benefits to Account for Income Distribution
* Stated preference approaches to environmental valuation
* Revealed preference methods (1): the travel cost model
* Revealed preference methods (2): hedonic pricing
* Valuing the environment: production function approaches
* Economic Impact Analysis
	1. **Writing the Benefit-Cost Analysis Report**

**Topic III: Multiple Projects and Constraints**

* Constraints – methods of ranking – mathematical programming approach – linear programming model. Qualitative Analysis: qualitative factors in capital budgeting – strategic aspects – strategic planning and financial analysis – informational asymmetry and capital budgeting – organizational considerations. Environmental appraisal of projects: types and dimensions of a project – meaning and scope of environment – environmental resources values – environmental impact assessment.
* Choice between mutually exclusive projects of unequal life – optimal timing decision – determination of economic life – inter-relationships between investment and financing aspects – inflation and capital budgeting. Analysis of firm and market risk: portfolio theory and capital budgeting – capital asset pricing model (CAPM) – CAPM and Capital budgeting.

**Topic IV: Analysis of Risk**

Types and measure of risk – simple estimation of risk – sensitivity analysis – scenario analysis – simulation analysis – decision tree analysis – selection of project – risk analysis in practice.

**Topic V: Project Management**

Forms of project organization – project planning – project control – human aspects of project management – prerequisites for successful project implementation. Network techniques for project management: development of project network – time estimation – determination of critical path – scheduling when resources are limited – PERT and CPM models – Network cost system. Project review and administrative aspects: initial review – performance evaluation – abandonment analysis – administrative aspects of capital budgeting – evaluating the capital budgeting system of an organization.

1. **Modes of Delivery:**

 The course will be delivered through lectures, Term Papers, individual and group assignments.

1. **Modes of Assessment**
* Written exam which covered all portions. Exam questions could be essay type, workout, multiple choices and others depending on the teaching approach and materials provided to students (50%)
* Case study assignment at individual and group Level (20%)
* Term Paper and Presentation (30%)
1. **References/Textbooks**

**Essential Reading**

* Chandra, Prasanna (2009). Projects: Planning, Analysis, Financing, Implementation and Review, 7th ed., Tata McGraw Hill.
* Larson, Erik W. and Clifford F. Gray, (2011). Project Management: The Managerial Process, 5th ed., McGraw Hill.

**Additional Reading**

* Boardman, A.E., et al. (2005). Cost-Benefit Analysis: Concepts and Practice, 3rd ed., Pearson Education.
* Cleland, David and Lewis Ireland (2006). Project Management: Strategic Design and Implementation, McGraw Hill.
* Cleland, David and Lewis Ireland (2007). Project Manager's Handbook: Applying Best Practices Across Global Industries, McGraw Hill.
* Esty, Benjamin (2003). Modern Project Finance: A Casebook, John Wiley & Sons.
* Ghattas, R.G. and Sandra L. McKee (2000). Practical Project Management, Pearson Education.
* UNIDO, Guidelines for practical project appraisal

**References**

1. Johansson, Per-Olov (2003). Cost-Benefit analysis of Environmental Change, Cambridge University Press.
2. Dasgupta, P., Sen, A., and M., Stephen. Guidelines for Project Evaluation; Project Formulation and Evaluation Series, No. 2. United Nations Industrial Development Organization, Vienna.
3. Little, I.M.D., and J. A., Mirrlees (1982). Project Appraisal and Planning for Developing Countries. Heinemann Educational Books London.
4. Layard, R., and S. Glaister (2003). Cost-Benefit Analysis, Cambridge University Press.
5. Pearce, D. W., and C. A., Nash (1981). The Social Appraisal of Projects: A text in Cost-Benefit Analysis, The MacMillan Ltd., London.
6. Fuguitt, D., and J., Wilcox (1999). Cost-Benefit Analysis for Public Sector Decision Makers, Quorum Books, Westport, Connecticut.
7. Hanley, N., and E. B.,Barbier (2009). Pricing Nature: Cost-Benefit Analysis and Environmental Policy, Edward Elgar, Cheltenham, UK, Northampton, MA, USA.
8. Mishan, E.J., and E. Quah (2007). Cost-Benefit Analysis.Rouledge Taylor & Francis Group London & New York.

**Econ 671: Seminar in development economics**

1. **Course Description**

This is a seminar course in economic development and as such will require an active degree of student participation.  Students are expected to participate in critical discussions and present their term papers on various issues of development. In this course, students will analyze through discussions and presentation the underlying theoretical assumptions and limitations of the orthodox and heterodox development theories and policy prescriptions

1. **Course Objective**

This is a seminar course in which each student is expected to actively participate. The primary objective is to enhance the student's ability to understand and critique theories of economic development. The delivery of this course has the tendency to bridge the gap between the theoretical and the real aspects. This course is delivered to make the students to be familiar with the real aspects of the developmental issues. Specifically, the course is expected;

* To help students acquire practical skill of examining multi-dimensional aspects of the development economics
* To provide the students up-to-date information about current aspects of the development
* To improve the understandings of the students about findings of empirical works related to development
1. **Pre-requisite:** Econ 522
2. **Modes of Assessment**

The modes of assessment include:

* Participation on various events …………………………………………… 20%
* Preparation of term paper …………………………………………………… 50%
* Presentation of Term papers (individual and group) ……………………… 30%

**Econ 672: Master Thesis**

* 1. **Description**

The master thesis comprises the preparation of proposal for the graduate thesis and the main research. Students identify and state briefly the problem and design methods of how the research could be done. Students prepare their thesis proposal based on the courses advanced econometrics application and research methods. The students will conduct their main research based on the approved proposal, submit their research findings and defend it.

* 1. **Course Objectives**

At the end of the course students will be able to;

Conduct problem solving researches that help the surrounding community and the nation at large and providing research finding that can be used as input for government policy makers, Reference of dialogues for different stakeholders, Reference for further inquiries in the area and so on.

* 1. **Assessment Method**

Students once they prepare the proposal the department organize presentation. The presentation must have at least two examiners from the department. The student’s proposal must be accepted by the examiners.

Up on the accomplishment of the students’ master’s thesis, their performances are evaluated based on the Dire Dawa senate legislation.