Bachelor of Social Sciences (Honours)*in* Development Economics

Prospectus

Session: 2023-24

Dhaka School of Economics

(*Constituent Institution of the University of Dhaka*)

4/C Eskaton Garden Road, Dhaka-1000, Bangladesh

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Part -I
About Dhaka School of Economics (DScE)

1.1 Introduction

Dhaka School of Economics (DScE), a Constituent Institution of the University of Dhaka, has begun its journey on 8 April 2010 aspiring to promote advanced studies and research in economics and other related disciplines to cater to the fast growing demand for well-trained economists and professionals, particularly in the areas of applied environmental and development economics and in related areas to contribute to teaching, research and evaluation, policy making and implementation of nation-building programmes for the fast expanding economy of Bangladesh. Apart from its main focus on teaching and research, the School is also committed to establishing a 'data-bank', with easy access for those who intend to engage themselves in economic research and policy analysis.

- To achieve these targets, Dhaka School of Economics sets out its vision to establish it as a 'Centre of Excellence' for advanced teaching and research in economics in line with London School of Economics and Political Science (LSE) and Delhi School of Economics (DSE), for example. More specifically, the school targets to continue its activities to fulfill the following missions:

- To deliver challenging, stimulating and research-oriented academic programmes in an environment that facilitates learning and development of independent critical thinking among the students.

- To ensure, through critical self-reflection, that its teaching and research remain at the forefront of economics and related disciplines, addressing the evolving challenges of the contemporary society.

- To make the institution internationally competitive and establish it as a 'Centre of Excellence' for advanced study and research in economics and related disciplines.

- To establish and intensify interactions with society in Bangladesh and leading academic institutions in different parts of the world.

The School is currently being housed in the Bangladesh Economic Association (BEA) Building at Eskaton Garden Road, Dhaka. The place is free from noise and transport hazards. DScE aspires to shift to its permanent campus at Purbachal in the course of time.

1.2 Academic Programmes

DScE has formally started from the academic session, 2011-12. Now we are providing degrees in the followingprogrammes:

Bachelor Programmes:
- Bachelor of Social Sciences (Honours) in Environmental and Resource Economics
- Bachelor of Social Sciences (Honours)in Development Economics
- Bachelor of Social Sciences (Honours)in Entrepreneurial Economics

Master Programmes:
- Master of Economics (MEcon) in Environmental Economics
- Master of Economics (MEcon) in Development Economics
- Post Graduate Diploma in Entrepreneurship Development
- Master of Economics (Entrepreneurship Economics)

The Master of Economics (MEcon) in Development Economics has been started from the academic year 2013-14. Under this programme, nine batches have already graduated and two batches are currently continuing their studies. Bachelor of Economics (BEcon) in Development Economics started its journey from academic session 2018-19. The name of this degree is changed by the University of Dhaka as the Bachelor of Social Sciences (Honours) in Development Economics from the session 2022-23. In this year the BSS (Honours) in Development Economics program will be enrolled its sixth batch.

DScE focuses on the application of theoretical, methodological and applied research-oriented approaches so that the students can acquire in-depth knowledge and understanding of the subjects studied. As a result, the students can confidently apply the knowledge and experiences gained in their respective fields to cope with the fast changing circumstances of a growing economy and an evolving society like Bangladesh. Special focus, thus, is given on applied economics, along with computer applications, besides endowing students with a strong theoretical understanding on the courses taught.

In addition to the formal class lectures, the School also organizes regular seminars, extension lectures and open discussions on various issues of contemporary interests, including socio-economic, environmental and other multidisciplinary issues with strong involvement of students, scholars and faculty members. This helps the students/scholars to improve their knowledge and practical understanding on diverse economic and related issues through interaction with a large number of specialists and experts from home and abroad from various fields.

Other masters and research degree programmes, including MPhil and PhD, shall be introduced in phases. Specialized diploma and certificate programmes may also be introduced in the coming years.

1.3 Research Programmes

Dhaka School of Economics (DScE) cherishes the philosophy of 'spreading advanced teaching and research in economics' for a fast growing economy like Bangladesh to deal with the challenges the country is increasingly facing in relation to the production of quality graduates and economists. In this regard, research and evidence-based teaching are given very high emphasis.

A focus of DScE's applied economics research programme is to contribute to poverty eradication through multi-directional and multi-disciplinary applied research and giving special emphasis on relevant subjects. Climate change, environment, water and other emerging development challenges are given proper attention. Currently, a multi-dimensional and inter-disciplinary research programme is being developed, where such concerns will be given special emphasis through research. DScE's research programmes are being carried out, mostly by its own faculty members with support from founding Chairman and Director, Dr. QaziKholiquzzaman Ahmad. Now he is Chairman of its Governing Council and Academic Council.

A number of research projects have been carried out by DScE since the beginning of its academic activities. Some of the recently completed research programmes are as follows:

- Investment in private sector in Bangladesh: identifying major issues and suggesting remedial measures;
- Employment and livelihoods of rural population of Bangladesh;
- Opinion polling concerning current socio-economic conditions in Bangladesh;
- An investigation into the nature and causes of rural-urban migration in the perspective of climate change in Bangladesh;
- Rice price formation in Bangladesh: an empirical investigation.

Besides these, a number of other research project proposals are currently being developed by Dhaka School of Economics under its multi-disciplinary research programme.

1.4 Library

DScE has set-up its own modern library and has procured a considerable number of important text books, reference books, research publications and periodicals from home and abroad. The School has given the highest priority on purchase of quality books. A good collection of text and reference books on environmental and development economics, including the most widely refereed and recent textbooks, are also available in the DScE library. It has also successfully collected sufficient digital resources, including access to numerous journals on economics, environmental economics and other disciplines of social sciences, on-line books and other study materials suitable for students and researchers. In addition, the Schoolhas a secured access to over 500 refereed journals of economics, environment and development studies.

1.5 Data Centre

Data deficiency, unavailability of data in required formats and limited access to data as required for various purposes are some of the major problems in conducting research and policy analysis in most developing countries, including Bangladesh. In order to overcome such challenges and to create an atmosphere for more economic research and analyses, DScE has started to establish a state of the art data bank. Data on various socio-economic, environmental and other development indicators will be collected, analyzed, categorized and stored. Apart from this, important secondary data will also be organized, stored and made available to all in a user-friendly way so that interested researchers could conduct research and policy analysis much hurdle. The school may also try to explore the possibility of joining with other similar institutes and organizations that work on data and get access to their data resources.

It is expected that besides DScE's own students, faculty members and researchers, other economists, policy makers, researchers, investors and freelance researchers from Bangladesh would be benefited from the data bank through user-friendly data accessibility on issues of diverse economic interests.

1.6 Governing Council of DScE

Chairman

- **Dr. Qazi Kholiquzzaman Ahmad**

Chairman, Dhaka School of Economics Foundation

Member Secretary

- **Dr. Jahangir Alam Khan**

Director, Dhaka School of Economics

Educationist (2 person)

- **Justice M. Tafazzul Islam**

- **ProfessorShibli Rubayatul Islam**
  Department of Banking and Insurance and Dean Faculty of Business Studies, University of Dhaka

Representative(2 person) from Academic Council of University of Dhaka

- **Dr. Mohammed Abu Eusuf**
  Professor, Department of Development Studies, University of Dhaka

- **Dr. Muhammad Shahadat Hossain Siddiquee**
  Professor, Department of Economics, University of Dhaka

Dean of relevant faculty

- **Dean**, Faculty of Social Sciences, University of Dhaka

Teacher representative

- **Dr. Narayan Chandra Sinha**
  Associate Professor, Dhaka School of Economics

Guardian Representative

- **Dr. Abul Barkat**
  Human Development Research Centre (HDRC)

Part -II

About the Programme: Bachelor of Social Sciences (Honours) in Development Economics

Based upon the experience of first several batches of students admitted in the Master of Economics (MEcon) in Development Economics programme with relatively diverse background, despite a story of notable success, it has been assessed that students with solid background in economics at the undergraduate level would better suit the main objective and vision of the programme. Therefore, the initiative has been undertaken to introduce the undergraduate programme in development economics.

The four year long, eight semesters Bachelor of Social Sciences (Honours) in Development Economics degree programme will entail a total of 138 credits. The programme comprises courses in language (both Bangla and English) and core areas of economic theory, quantitative economics, social sciences, and development, e.g. environment, population, gender, poverty, rural development, etc. Furthermore, a number of courses that are multidisciplinary in nature, but nevertheless important for the discipline are also included. Successful culmination of the degree will require completion of all 138 credits for students.

It is expected that upon completion of this programme, students will have a solid background preparation in theoretical and methodological knowledge in areas related to economic development, which will enable them to move into the practical world with certain degree of confidence. Some of them, hopefully, will acquire enough interest and expertise to go for advanced degrees in economics.

2.1 Core Elements of the Bachelor of Social Sciences (Honours) in Development Economics Programme

The Bachelor of Social Sciences (Honours) in Development Economics programme of Dhaka School of Economics has the following features:

- The duration of the programme is 4 (four) years, comprising of two semesters per year – each lasting for 06 months.
- Total of 138 credits with a minimum of 16 credits per semester. In addition, there will be a viva-voce examination during the second semester of each year in the programme. However, viva-voce during the first two years will entail 1.0 credit

(only at the end of second and fourth semester), and during third and fourth years it will entail 2.0 credits (at the end of sixth and eighth semesters).

- English is the medium of instruction at DScE.

2.2 Admission into the Bachelor of Social Sciences (Honours) in Development Economics Programme

To enroll in the Bachelor of Social Sciences (Honours) in Development Economicsdegreeprogrammefor the Session 2023-24, students will be required to fulfill the following criteria:

- Candidates must have completed SSC/Dakhil/O level or equivalent examinations of 2018 to 2021 and HSC/Alim/A level or equivalent examinations of 2022 and 2023 from a recognized Board of Education in Bangladesh or acquired an *equivalent* certificate from abroad securing minimum score of 6.0 (including 4th subject) or its equivalent score in the discipline of Science, Humanities, Commerce or Business Studies in 2022 or 2023. Candidates having taken O and A level examinations must have passed at least 5 subjects at the O level and 2 subjects at the A level examinations. These candidates, out of the 7 subjects, must have obtained *at least* a 'B' grade in 4 and a 'C' in 3 subjects[1]. Preference will be given to those who earlier had studied mathematics or economics in HSC/Alim/A level or equivalent examinations.

- The admission test is held once every year following the publication of HSC/equivalent results.

- Instead of an admission test, the School may choose to select its students on the basis of cumulative grade point average (CGPA) obtained by students in SSC & HSC or equivalent examinations. However, DScE reserves the right to choose or change its admission criterion.

2.3 Method(s) of Selection

Method(s) may include both written and/or oral test(s) of the qualifying candidates. The written test may include MCQs, short answers, focus writing and problem solving type of questions. Any decision made by DScE shall be final.

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[1] For the O level and A level examinations, scores are estimated following this scale: A = 5.0, B = 4.0, C = 3.5, D = 3.0

2.4 Evaluation and Grading[2] System

Evaluation and grading of all taught courses shall be carried out as per the rules of the University of Dhaka[3]. These include:

- Semester final examination
- Term papers and assignments
- Class attendance and
- Active participation in class /tutorial /group discussion and class tests, etc.

The Marks distribution for the Evaluation of the Degree of Bachelor of Social Sciences (Honours) in Development Economics is as follows[4]:

Evaluation Criterion	% of Marks	
Class Attendance	10	10
Home Assignment, Quiz and Tutorial/Lab Test	10	10
Mid-term Examination/Class Test	15	30
Semester final examination	40	50
Total	75	100

For each course, marks obtained in the semester final examination and the sessional marks awarded by the course teacher(s) for class attendance; term papers and assignments; and class performance based on active participation in classroom discussions, tutorial classes and class tests shall be summed up and converted into equivalent letter grades following a 4-point grading scale as shown below:

Grading Structure for the Bachelor of Social Sciences (Honours) in Development Economics Programme of DScE:

Mark Range (in %)	Letter Grade	Explanation	Grade Point
80 and above	A+		4.00
75 to less than 80	A	Excellent	3.75
70 to less than 75	A-		3.50
65 to less than 70	B+		3.25
60 to less than 65	B	Very Good	3.00

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[2] This section is prepared in line with the guidelines of the Faculty of Social Sciences of the University of Dhaka (DU). Any change in examination rules by Dhaka University and applicable to its constituent institutions shall DScE shall be applicable to DScE also. For any ambiguity, DScE shall follow the rules of examinations of DU.

[3] Any change by DU in this regard shall automatically be applicable to DScE. In case of any ambiguity, rules set out by Dhaka University shall be given priority over DScE's own rules and systems.

[4] Any change in the DU Guidelines applicable for DScE in this regard shall apply.

55 to less than 60	B-		*2.75*
50 to less than 55	C+	Good	*2.50*
45 to less than 50	C		*2.25*
40 to less than 45	D	Passing	*2.00*
Below 40	F	Failing	*0.00*
…………………………	I		*Incomplete*
…………………………	W		*Withdrawal*

- An 'F' grade is indicative of an unacceptable 'failing' performance overall by a student, i.e. fail to earn any credit. If a student, in certain exceptional cases, fails to appear a course-final examination (maximum two courses in a single semester) and if the Examination Committee recommends her/his case to the University of Dhaka, then the case will be considered as 'F' grade. In such a case, a student shall be required to appear the semester final examination for the course(s) s/he fails with the next batch without fine for every course s/he appears (up to two courses maximum in a single semester). However, regular examination fee(s) do apply.

- 'I' grade is indicative of a situation where a student, for any non-academic reason beyond his/her control, is unable to complete the full requirements of the course by not being able to sit for the semester final examination. With the submission of valid and authenticated evidence of such reason(s), and the recommendation of the course teacher (to be reported to the Chairman of Examination Committee via the Programme Coordinator), that particular student may be allowed to complete the semester final examination with the next batch. Meanwhile, the student concerned will be promoted to the next semester if s/he meets the minimum passing grade requirement. If an 'incomplete' grade (Grade 'I') is not cleared with the next batch, the 'I' grade shall automatically be changed into an 'F' (failing) grade. A maximum of two 'I' grades may be allowed to a student in one semester. In such a case, a student shall be required to pay the regular fee without fine for every course s/he appears (up to two courses maximum in a single semester).

- A'W'(withdrawal) grade shall be awarded when a student is permitted to withdraw/ drop a course/semester without fine. Withdrawals without fine are not permitted after two months of any semester started. A student may sign up for re-admission in the semester concerned with the next batch by paying the full fees for that semester.

2.5 Promotion/Improvement/Readmission/Drop-out Policies[5]

Promotion

- For promotion from the first to second semester, a student shall have to earn a minimum SGPA of 2.00.

- For promotion from the second through the final semester, a student shall have to earn a minimum CGPA of 2.25, taking into consideration all the grade points earned in total number of courses of first through the final semester and improvement grade, if there is any.

- A student failing to clear up the annual University of Dhaka and DScE dues of the year of the study shall not be promoted to the next semester, as prescribed.

Improvement/Repeat

- A student earning 'F' grade in any course may be allowed to improve the grade with the next batch without fine.

- If a student obtains a grade lower than 'B-'(minus) in a course, s/he may be allowed to repeat the semester final examination only once with the next immediate batch for the purpose of grade improvement by forgoing her/his earlier term final marks. In such a case, sessional marks earned by the student in earlier semester would remain valid and *only* the semester final grade can be improved.

- If a student obtains 'B-' (minus) or better grade in any course, s/he shall not be allowed to repeat the course for grade improvement.

- If a student likes to improve the grade point earned in a course of the 8th semester [in the event s/he scores less than a B-(minus)], s/he must apply for such improvement examination before the certificate is issued. In such a situation, a student may be allowed to appear the grade improvement examination within the next 45 days following publication of the final result. In such a case, a student shall be required to inform DScE in writing about her/his intent to improve the grade *within* 7 days of the publication of her/his final results.

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[5]This part is prepared in line with the guidelines of the Faculty of Social Sciences of the University of Dhaka (DU). Any change in the guidelines of the University of Dhaka will be applicable to Dhaka School of Economics (DScE). For any ambiguity in DScE's examination rules, the School shall follow the examination rules set out by the University of Dhaka for its undergraduate programmes under the Faculty of Social Sciences. In no situation, a student shall be allowed to claim any undue benefit (grade and promotion related benefits) which are not permitted under the examination rules of the University of Dhaka.

- Improvement shall not be allowed once the certificate is issued.

- A student carrying 'F' grade in any course shall not be awarded the degree unless s/he improves it by appearing at the semester final examination with the next batch.

- If a student gets 'F' grade in the improvement examination, s/he shall automatically be dropped out from the semester and the student shall have to seek re-admission with the next batch, provided the student concerned is eligible for re-admission.

- For improvement of grade in a course, the student shall apply to the chairman of the concerned examination committee at least 4 (four) weeks before the start of semester final examination.

- A student may be allowed to improve the grade of a particular course only once.

- No student shall be allowed to improve the grade of any term paper/assignment, active participation in the class discussion/tutorial class/ group discussion/class test marks and the grade earned in the written or oral (if any) comprehensive examination, i.e. no improvement shall be allowed for sessional marks/grades once awarded to a student for any course in a semester, but *only* semester final examination can be improved, should a student intends so.

Re-admission

- A student failing to obtain the necessary grade points for promotion from one semester to the next may seek re-admission with the next batch.

- For re-admission, a student shall have to apply within one month of the announcement of results of the concerned semester.

- Upon re-admission, grades earned in the course(s) in earlier semester by a student shall cease to exist and the student has to retake all the course works and examinations.

- A student shall not be allowed re-admission in more than two semesters during the total time span (48 months) of the Bachelor of Social Sciences (Honours) in Development Economics programme. In any case, a student must complete Bachelor of Social Sciences (Honours) degree within 6 (six) years.

Drop Out

- A student failing to earn the GPA for promotion from one semester to the next after taking re-admission in any semester shall be dropped out from the Bachelor of Social Sciences (Honours)in DevelopmentEconomicsprogramme.

- A student obtaining a 'F' grade in any course after taking re-admission or improvement examination(s) in any semester shall be considered dropped out from that semester.

2.6 Fee Structure of the Bachelor of Social Sciences (Honours) *in Development Economics Programme:*

The fee structure for the Bachelor of Social Sciences (Honours) in Development Economics Programme by Dhaka School of Economics for the students to be admitted is as follows:

Sl. No.	Particulars		Amount (in BDT)		
			Admission & 1st Semester	*2nd-8th Semester (Each Semester)*	*Total*
A	*University of Dhaka[6]*				
	Registration fee		2,000.00		2,000.00
	Examination fee		3,000.00	3,000.00	24,000.00
	Transcript		450.00	450.00	3,600.00
	Examination entry fee		100.00	100.00	800.00
	Sub-total		**5,550.00**	**3,550.00**	**30,400.00**
B	*Dhaka School of Economics*				
	Admission fee		10,000.00	1,000.00	17,000.00
	Tuition fee		38,400.00	38,400.00	3,07,200.00
	Library fee		2,000.00	2,000.00	16,000.00
	Computer lab fee		2,500.00	2,500.00	20,000.00
	Session charge		3,500.00	3,500.00	28,000.00
	Examination Center fee		1,000.00	1,000.00	8,000.00
	Sub-total		*57,400.00*	*48,400.00*	*3,96,200.00*
C	*Grand total (A+B)*		*62,950.00*	*51,950.00*	*4,26,600.00*

❖ In addition to the fees mentioned above, payments will be made by the students as follows:
- Payment for prospectus Taka 1,000.00 (One thousand) to be made in cash.
- Library caution money (refundable) Taka 2,000.00 (Two thousand) to be paid at the time of admission.

- For ID Card Taka. 130.00
- Admission & 1st semester fee Taka. (62,950+1,000+3,000+130) = Taka. 66,080.00

*Subject to change.

Scholarship and Tuition Fee Waiver Facilities for Bachelor of Social Sciences (Honours) Students at DScE

1. **Waiver** at the time of new admission

(a) General tuition fee waiver

Students Category	Tuition Fee Waiver
Applies to all new students (only for admission time)	15%

(b) Additional waiver based on previous result(s)

	Students Category	Tuition Fee Waiver (only for admission time)
(i)	Students obtained GPA 5.00 in both SSC and HSC examinations	20%
(ii)	Students obtained GPA 5.00 in HSC examinations	15%
(iii)	Students obtained an average GPA of 4.50 in SSC and HSC examinations	10%

2. **Merit waiver** in future semesters (based on semester results)

(a) Merit tuition fee waiver

	Semester Result	Tuition Fee Waiver (for the immediate next semester only)
(i)	Students obtained a SGPA of 3.85 and above in a semester	40%
(ii)	Students obtained a SGPA of 3.75 to 3.84 in any semester	25%
(iii)	Students obtained a SGPA of 3.50 to 3.74 in any semester	10%

Semester-wise Course Structure and Syllabi

Semester	Course Number and Title	Marks	Credit Hours
First Year			
I.	101: Principles of Microeconomics	100	4
	102: Mathematics for Economists – I	100	4
	103: English Language and Lab	100 (75+25)	4 (3+1)
	104: Introductory Statistics	100	4
	Semester Total	*400*	*16*
II	105: Principles of Macroeconomics	100	4
	106: Intermediate Statistics	100	4
	107: Bangla Language and Lab	100 (75+25)	4 (3+1)
	108: Mathematics for Economists – II	100	4
	120: Viva Voce	25	1
	Semester Total	*425*	*17*
Second Year			
III	201: Intermediate Microeconomics	100	4
	202: Principles of Accounting	100	4
	203: Principles of Sociology	100	4
	204: Development Economics -I	100	4
	Semester Total	*400*	*16*
IV	205: Intermediate Macroeconomics	100	4
	206: Rural Development and Agricultural Economics	100	4
	207: Public Finance	100	4
	208: Government and Politics	100	4
	220: Viva Voce	25	1
	Semester Total	*425*	*17*
Third Year			
V	301: International Economics	100	4
	302: Money, Banking and Finance	100	4
	303: History of Bangladesh	100	4
	304: Econometrics -I	100	4
	Semester Total	*400*	*16*
VI	305: Advanced Microeconomics	100	4
	306: History of Economic Thought	100	4
	307: Population and Development	100	4
	308: Labor Economics	100	4
	320: Viva Voce	50	2
	Semester Total	*450*	*18*

Fourth Year			
	401: Advanced Macroeconomics	100	4
	402: Development Economics -II	100	4
VII	403: Research Methodology	100	4
	404: Econometrics -II	100	4
	405: Software Applications for Economists	75	3
	Semester Total	*475*	*19*
VIII	406: Economics of Environment and Sustainable Development	100	4
	407: Economic Development and Gender Equality	100	4
	408: Development Issues of Bangladesh	100	4
	409: Political Economy of Underdevelopment	75	3
	410: Research Report	50	2
	420: Viva Voce	50	2
	Semester Total	*475*	*19*
	Grand Total	**3450**	**138**

First Year: First Semester

C-101: PRINCIPLES OF MICROECONOMICS

Course Objectives

The objective of microeconomic theory is mainly to analyze how individual decision-makers, both consumers and producers, behave in the market placeunder a variety of economic environments. Examples of such environments are bidding in an auction, collectively deciding whether to build a public project, or designing a contract that will induce a worker to exert maximum effort. The common goal in all of these issues is to identify the incentives of the various participating agents and the trade-offs that they face. Understanding of the behaviour of economic agents and microeconomic trade-offs is also crucial for the design of microeconomic policies such as income taxation, healthcare provision and policies to promote competition. In order to understand how individual decision-makers behave, micro-economists build models, use data and conduct experiments.

The course is, for the most part, conceptual in nature and is intended to introduce the students with some basic tools and concepts of microeconomics, e.g. some definitions and common terminologies used in economic literature, the maximum productive capacity of an economy given its resource constraints, how a market economy functions, structure of markets in market economy, etc.

Course Contents

1. *Nature and Scope of Economics*: Definition of Economics; the Logic of Economics (the post-hoc fallacy, *ceteris paribus*, fallacy of composition), Economic Problems- Scarcity, Choice, Opportunity Costs and Trade-Offs; Scope of Economics, Types of Economics; Microeconomics vs. Macroeconomics, Positive vs. Normative Economics, Subject Matters of Microeconomics.

2. *Demand, Supply and the Equilibrium*: The Law of Demand, the Demand Curve, Individual and Market Demand, Factors Affecting the Demand Curve, Shifts vs. Movement along the Demand Curve, the Law of Supply, the Supply Curve, Factors Affecting the Supply Curve, Shifts vs. Movement along the Supply Curve; Interaction of Demand and Supply: Equilibrium, Effect of a Shift in Demand or Supply or both; Price Controls.

3. *Elasticity*: Definition of Elasticity, Types: Price Elasticity of Demand, Price Elasticity of Supply and Income Elasticity, Cross Price Elasticity, Applications of Elasticity. Elastic and Inelastic Demand; Effect of a Tax or a Subsidy.

4. *Consumer Behaviour*: Utility and Choice, Marginal Utility, Diminishing Marginal Utility, Equi-marginal Principle, Indifference Curves and their Properties, Budget Sets, Equilibrium of the Consumer with Indifference Curves and Budget Sets, Income and Substitution Effects, Deriving the Demand Curve from the Indifference Curves and Budget Sets, Complements and Substitutes, Consumer Surplus.

5. *Theory of Production and Costs*: Production: Concept of a Production Function, Total, Average and Marginal Product, the Law of Diminishing Returns, Returns to Scale; Cost: Fixed and Variable Cost, Total, Average and Marginal cost, Short Run and Long Run Costs; Revenues: Total, Average and Marginal Revenue, Equating Marginal Revenue with Marginal Cost.

6. *Market Structure*: Concept of Market in Economics, Types of Markets, Perfectly Competitive Markets, Monopoly, and Monopolistic Competition.

7. *Factor Market*: Perfectly Competitive and Imperfectly Competitive Markets.

Textbook

1. McConnell, C. R., Brue, S. L., and Flynn, S.; *Economics: Principles, Problems, and Policies*; McGraw-Hill Series in Economics, 20th Edition.

References

1. Pindyck, R. S, Rubinfield, D. L. and P. L. Mehta, 2009. *Microeconomics*, Pearson, 7th Edition.
2. Arnold, R A., 2010. *Economics*, South Western Publishing Company, 8th Edition.
3. Samuelson P. A. and W. D. Nordhaus, 2005. *Economics*, McGraw-Hill USA, 18th Edition.
4. Mankiw, N. G, 2006. *Principles of Economics*, Thomson South Western Publishing, 4thEdition.

C-102: MATHEMATICS FOR ECONOMISTS -I

Course Objectives

This course is designed to develop understanding of basic concepts and principles of mathematics used in the area of economic development. It will equip the students of economics with mathematical tools used in the solution of problems for economic development. It helps to develop an understanding of theories and practices of mathematical approach in taking decisions. The course will provide elementary ideas of algebra, geometry, calculus and train how to apply these mathematical tools to solve economic problems. It will also stimulate interest of students in economics and business regarding implications of mathematics.

Course Contents

1. **Basic Concepts of Economic Models**: Variables, Constants, Parameters, Equations, Identities, the Real Number System, the Concepts of Sets and Operations on set, Equations, Functions, Types of Functions, Graphs, Slopes and Intercepts.

2. **Matrix**: Matrices and Vectors, Matrix Operations, Kronecker Products, Commutative, Associative and Distributive Laws, Identity and Null Matrices; Determinants and Non-singularity, Minors and Cofactors, Properties of a Determinant, Properties of Transposes, Inverses and their Properties, Inverse Matrix and Solution of Linear Equation System, Cramer's Rule for Matrix solutions, Eigen values and Eigen Vectors, Economic Applications.

3. **The Derivative:** Rules of Differentiation, First Derivative, Second Derivative and Convexity, Higher Order Derivatives, Limits, Partial Differentiation, Maxima and Minima; Functions of Several Variables and Partial Derivatives.

4. **Constrained and Unconstrained Optimization**: Rules of Unconstrained Optimization; Economic Applications of Unconstrained Optimization, Optimization of Cobb-Douglas Production Functions, Profit Maximization; First and Second Order Conditions, Lagrange Multiplier, Economic Applications, Utility Maximization, Cost Minimization, Indirect Utility Functions.

5. **Exponential and Logarithmic Functions in Economics:** Nature of exponential functions, Natural exponential functions and the problem of growth, logarithmic functions, optimal timing, application of exponential and logarithmic derivatives in economics, interest compounding, effective vs. nominal rates of interest, discounting.

6. **Integral Calculus**: The Indefinite Integral: Rules of Integration, Integration by Substitution, Integration by Parts, Economic Applications; The Definite Integral: The Fundamental Theorem of Calculus, Properties of Definite Integral, Area between Curves, Improper Integrals, Economic Application, Domar Growth Model.

Textbooks
1. Chiang, A. C. and K. Wainwright, 2005. *Fundamental Methods of Mathematical Economics*, 4th Edition, McGraw-Hill.
2. Dowling, E. T., 2001. *Theory and Problems of Introduction to Mathematical Economics*, Schaum's Outline Series, 3rd Edition, McGraw-Hill.

References

1. Michael Hoy, John Livernois, Chris McKenna, Ray Rees and ThanasisStengos 2011.*Mathematics for Economics*, 3rd Edition.The MIT Press, Cambridge, Massachusetts.
2. Simon, C. P. and L. Bloom, 1994. *Mathematics for Economists*, Viva Books Limited, India.
3. Dixit, A. K., 1990. *Optimization in Economic Theory*, 2nd Edition Oxford University Press.

C-103 ENGLISH LANGUAGE AND LAB

Course Objectives

This course is an English language and laboratory course, designed for 1st year Development Economics Major students. The emphasis of the course is on the students' being able to obtain knowledge of correct English writing, speaking and conversing as well as reading and understanding of English articles and phrases, also learning to edit and face interviews in English. The **Lab class** will bring students to the podium so that they can overcome their hesitations to speak in English and give speech in English.

Course Contents
I. English Language (75 Marks, 3 Credit Hours**)**

- *Problem Solving*(a) Main Verbs, (b) Tense, (c) Modals and Modal-related patterns, (d) Causatives, (e) Conditionals, (f) subjunctives, (g) infinitives, (h) Have+ Participle, (i) Auxiliary Verbs, (j) Pronouns, Relative Pronouns, Nouns and Adjectives, Nouns functioning as Adjectives and Other Parts of Speech, (k) Determiners, (l) Comparatives and Propositional Idioms, (m) Voice – active, passive, (n) Point of View for Syntactical Pattern, (o) Agreement of Verbs, (p) Introductory Verbal, Modifiers, (q) Sentences and Clauses, (r) Word Choice – Antonym, Synonym, Homonym, Homograph, Homophone; (s) Wh. Questions, (t) Punctuations: Full-stop, comma, colon, semi colon, apostrophe, capital letter, hyphen, quotation marks, titles etc. and (u) proof-reading, (v) Narration

- *Reading Comprehension:* Students will be given paragraphs to read within a specified time, and then answer questions relating to the paragraph.

- *Paragraph Writing:* Students will be assigned to write paragraph in-class on some topic.

- *Editing Class:* Students will be given to edit the submitted paragraphs by other students, and this way they will learn issues related to editing.

- *Facing Interviews:* Students will form groups and take mock interviews of each other, and the instructor will guide the procedure.

II. English Language Lab (25 Marks, 1 Credit Hour**)**

- Five students are to be brought on the podium at a time. Other students of the class will be interrogating, and likewise every student should be brought in turn and questions should be asked from the areas of literature, science, current politics, international affairs, games and sports, etc. The instructor will act as the moderator.

Textbook

- Barron's TOEFL IBT: Internet-based test, Volume 1, Pamela J. Sharpe, Barron's Educational Series, 2010

References

- Standard Grammar Books of Instructor's Choice
- IELTS Cambridge Books 1 to 11.

104: INTRODUCTORY STATISTICS

Course Objectives

This course is introduced to develop student's knowledge regarding the sample and population, data types and scale, sources of data. It will also provide an adequate knowledge regarding the collection, organization, presentation, analysis, and interpretation of data for making more effective decisions regarding the social & economic development of individual or country.

Course Contents

1. *Introduction to Statistics:*Meaning of statistics, scope and limitations of statistics, application of statistics in different disciplines, uses and abuses of statistics, concepts of descriptive and inferential statistics.

2. *Statistical Concepts and Data Collection:*Data, and sources of data- primary and secondary data, population, Sample, random sample, parameter, statistic, variables and types of variable-qualitative and quantitative variable, discrete and continuous variable, scales of measurements, classification of variable by scales of measurements. Primary data, secondary data, methods of collection of primary data.

3. *Presentation and Classification of Data:*Classification and tabulation of data, sorting data, grouping qualitative and quantitative data, construction of frequency distribution and relative frequency distribution, graphical presentation of frequency distribution-histogram, frequency polygon, ogive ,bar diagram, pie diagram, scatter diagram etc.

4. *Measures of Central Tendency and Dispersion:*Mean, median and mode; different types of mean with their properties and their relationship, quantiles with their

graphical presentation, application of different measures of Central Tendency. Different measures of dispersion, properties and applications of different measures of dispersion, coefficient of dispersion, coefficient of variation, standardized variable.

5. *Moment and Shape Characteristics of Distribution:*Raw and central moments, moments of higher order in terms of lower order moments, measures of skewness, kurtosis and their measures and interrelationship, graphical display of skewness and kurtosis.

6. *Description of Bivariate data:*Concept of bivariate data, construction of bivariate frequency table, graphical presentation of bivariate data, simple correlation and its measure, properties of simple correlation coefficient, Spearman's rank correlation, intra-class correlation, correlation ratio, simple regression and principle of least squares, properties of simple regression coefficient. Concept of partial and multiple correlation and regression, partial correlation coefficients, relationship between simple, partial and multiple correlation coefficients, coefficient of determination.

7. *Contingency Table and Association of Attributes:*Analysis of $r \times c$ contingency table, derivation of 2×2 contingency table, degrees of freedom, Yate's correction. Basic ideas of association, concept of independence, measures of association, properties of association, partial association.

8. *Theory of Probability:*Meaning and scope of probability, axioms of probability, experiment, sample space, event, different types of events, event space and probability space, union and intersection of events, difference between probability and possibility, decision tree, compound probability, conditional probability and independence, prior probability, posterior probability, total probabilities & Bayes' theorem and their applications, stochastic independence, some theorems related to independent events.

9. *Random Variable:* Discrete and continuous random variables, probability mass function and density function, distribution function and their properties. Mathematical expectation and variance, joint distribution functions, marginal and conditional probability mass and density functions, independent random variables, conditional expectation and conditional variance. Joint distribution functions, independent random variables, sum of independent random variables.

10. *Interpolation and Extrapolation:*Simple difference and divided difference table, Newton's forward and backward interpolation formula for equal interval of the argument. Interpolation with unequal intervals of the argument. Central difference interpolation formulas and its uses. Lagrange multiplier and Newton-Raphson method.

Textbooks

1. Spiegel, M. R, 2003. *Theory and Problems of Probability and Statistics*, McGraw Hill Inc. New York.
2. Weiss, N. (2007) : Introduction to Statistics, 7th Edition, Addison Wesley.

References

1. Newbold, P., Carlson, W. L. and B. Thorne, 2006. *Statistics for Business and Economics*, Prentice Hall.
2. Jain, D. and B. Jhunjhunwala, 2006. *Business Statistics*, Tata McGraw-Hill Inc. New York.
3. Newbold, P. (2004) : Statistics for business and economics, 3rd Edition, Prentice-Hall.
4. Gupta, S. P. and Kapoor, V. K. (2002): Fundamental of Mathematical Statistics, Sultan Chand & Sons.
5. Scarborough, J.B. (1996) : Numerical Mathematical Analysis, 5th Edition, Oxford and IBH, New Delhi.
6. Anderson, D. R.; Sweeney, T.A. and Williams (2005). *Statistics for Business and Economics*, Eighth Edition, Thomson South-Western.

First Year: Second Semester

Courses:
105: Principles of Macroeconomics
106: Intermediate Statistics
107: Bangla Language and Lab
108: Mathematics for Economists – II
120: Viva Voce

C-105: PRINCIPLES OF MACROECONOMICS

Course Objectives

Macroeconomic theory is a branch of economics that examines the economic behaviour of aggregates – income, employment, output, and so on, on a national scale. How an economy, as a whole works, how economy-wide aggregates such as total output, income, employment and general price level are determined, how they change and how the interrelationships between households, firms, government and foreigners affect the economy over time are the subject matters of macroeconomics. Economists distinguish between two types of uncertainty: aggregate and idiosyncratic. Macroeconomic events like changes in interest rates, fluctuations in exchange rates, rise in the price level, etc. create uncertainty in the economy – which is aggregate uncertainty. Macroeconomics is essentially about the aggregate sources of uncertainty that affect the entire economy. This branch of economics is also concerned with making policy prescriptions for national level problems. It makes an attempt to provide scientific analyses of the determinants of national output, employment, consumption, investment, inflation, rate of interest, rate of exchange rate and such other related macroeconomic variables. Macroeconomic management is a major policy issue in a country like Bangladesh.

Course Contents

1. *Introduction*: Definition of Macroeconomics, Difference between Microeconomics and Macroeconomics, Macroeconomic Variables, Subject Matters of Macroeconomics, Objectives and Instruments of Macroeconomics.

2. *National Income Accounting*: Concept of National Income Accounting; Differences between Gross and Net, Domestic and National, Market Price and Factor Cost, Real and Nominal; Methods of Measuring National Income: Value Added/Production Method, Expenditure Method and Income Method; Problems of National Income Accounting;Importance of National Income Accounting; GNP as an Indicator of Economic Welfare;Concept of Circular Flow of Income and

Expenditure in a Two, Three and Four Sector Economy; Price Deflators, GDP and its Components: Consumption, Investment, Government Expenditure, Net Exports.

3. *Income and Employment Determination:* Output and Employment; Aggregate Demand and Aggregate Supply; Equilibrium Level of Output and Income; the Classical Theory of Income and Employment Determination: the Say's Law; Savings-Investment Equality; Wage-Price Flexibility; Changes in Equilibrium Output and Employment in the Classical Framework.

4. *Critique of the Classical Model*: The Great Depression; Keynes' criticism of the classical model; the Keynesian Theory of Income, Employment, Interest and Price; Consumption Function;SavingsFunction;Concepts of MPC/MPS and APC/APS;Short Run and Long Run Consumption Function; Concept of Investment Function;Gross and Net Investment;Induced and Autonomous Investment; Concept of Simple Income Multiplier.

5. *Fiscal Policy, Deficits and Debt*: Introduction to Fiscal Policy; Expansionary and Contractionary Fiscal Policy, Built-in Stabilizers; Public Debt.

Textbooks

1. McConnell, C. R., Brue, S. L., and Flynn, S.; *Economics: Principles, Problems, and Policies*; McGraw-Hill Series in Economics, 20th Edition.

2. Mankiw, N. G., 2012. *Macroeconomics*, 8h Edition, Worth Publishers, Inc.

References

1. Barro, R. J., 1997. *Macroeconomics*, 5th Edition, the MIT Press.

2. Dornbusch, R., Fischer, S. and R. Startz, 2010. *Macroeconomics*, 11th Edition, McGraw Hill/Irwin.

3. Arnold, R A., 2010. *Economics*, South Western Publishing Company, 8th Edition.

106: INTERMEDIATE STATISTICS

Course Objectives

This course is designed to gather adequate knowledge by the students regarding the different probability distribution and its parameters estimation procedure using statistical methods. Regarding the estimated parameters statistical inference briefly discuss in this course. Using these statistical methods students may enable to analyze the economic and social problems and to take appropriate decision for economic

development of the country.

Course Contents

1. *Probability distributions*
   - *Univariate Discrete Probability Distribution:* Bernoulli, binomial, Poisson, geometric, negative binomial etc. and determination of their expectation value and variance.

   - *Univariate Continuous Probability Distribution:* Study on normal, exponential, lognormal. Applications of these distributions in economics.

   - *Sampling Distribution:* Distribution of Chi-square, F and student's t distributions, standard error of statistics, application in economics.

2. *Estimation of Parameters:*
   - *Point Estimation:* Basic concepts of point estimation, estimation of parameters, different methods- method of least squares, method of maximum likelihood and their related properties.

   - *Interval estimation:* Basic concepts of interval estimation, confidence interval, methods of finding confidence interval-exact and approximate confidence interval and small sample confidence interval.

3. *Test of Hypotheses:*
   - *Parametric Test of Hypothesis:* Preliminary ideas of statistical hypothesis test, elements of test of hypothesis, errors in testing hypothesis, type 1 and type 2 error, level of significance, one tailed and two tailed test, p-value. Usual test based on normal distribution, t, Chi-square and F test. Test of significance of proportion, mean, variance, correlation coefficient and regression coefficients, two sample (independent and paired) settings- equality of two proportions, means, variances and their confidence intervals, large sample test, likelihood ratio test and its application in economics.

   - *Nonparametric Test:* Meaning of nonparametric test, tests of goodness of fit (Binomial, Poisson and Normal distributions), contingency table- independence test and exact test, rank tests, sign test, run test, Komogorov-Smirnov test, median test, Mann-Whitney U-test, Wilcoxon test.

4. *Index Number:* Definition of index number, uses of index number in economics, different formulae for construction index number, test of index number, cost living index number, purchasing power of money.

5. *Time Series Analysis:* Meaning of time series, importance of time series in business and economics, different components of time series, measurements of trend by different methods (graphical method, method of semi average, method of least squares, method of moving average), exponential smoothing, measurements of seasonal variations (method of simple average, ratio to trend method ratio to moving average method), projection data, cyclical function and measures of cyclical function.

6. *Social Statistics:* Social accounting matrix, inequality and measures of inequality, Lorenz curve of income, Gini coefficient, Atkinson's index, poverty and measurement of different poverty indices, Social inequality by sex, age, rank, caste, race, class, power, rule and social connections.

Textbooks

1. Gupta, S. P. and Kapoor, V. K. (2002): Fundamental of Mathematical Statistics, Sultan Chand & Sons.
2. Islam, M. N.: Introduction to Statistics and Probability, 3rd Edition.

References

1. Anderson, D. R.; Sweeney, T.A. and Williams (2005). *Statistics for Business and Economics*, Eighth Edition, Thomson South-Western.
2. Makridakis, S., Wheelwright, C and Hyndman, R. J., 1997. *Forecasting: Methods and Applications*, 3rd edition. Wiley.
3. Johnson, N.&Kotz, S. and Kemp, A. (1994): Univariate Discrete Distributions, 2nd Edition, John Wiley & Sons, New York.
4. Johnson, N. and Balakrishnan, N. (1994): Continuous Univariate Distributions 2nd Edition, John Wiley & Sons, NY.
5. Saxena, N. C. & Surendar, P. N.: Statistical Inference.

107: BANGLA LANGUAGE AND LAB

Course Objectives

This course is very important as it will enhance the skills of the students to communicate their versions on any relevant topic(s) to the diverse audience orally in their own language. At the same time, this course will put emphasis to develop their writing skills in their native language.The**Lab class** will bring students to the podium so that they can overcome their hesitations to speak in their own language/give speech in Bangla.

I. Bangla Language: Applied Rules (Theoretical)evsjvfvlv: cÖ‡qvMwewa (ZË¡xq) (*75 marks; 3 credit hours*)
Course Contents(**Av‡jvP¨m~Px)**

  cÖ_gfvM : evsjve¨vKiY

1. aŸwb-eY©-Aÿi-D"PviY|
2. kã: kãfvÛvi, kãMVb, c`MVb, evsjvfvlvwkL‡bkãvewji ¸iæZ¡ I cÖ‡qvRbxqZv, DrmcwiPq I AccÖ‡qvM|

3. evbvb: hy³ e¨Äb, Y-Z¡ I l-Z¡ wewa, cÖwgZevsjvevbv‡biwbqg, mwÜ I cÖZ¨q-NwUZwbqg, m~Îmnevbvbbï×KiY|

4. fvlv-ixwZ: mvay, PwjZ, AvÂwjK I cÖwgZfvlvi ¯^i~c|

5. Awfavb I cwifvlv: Awfavb I †KvlMÖš' e¨envic×wZ ¸iæZ¡: cwifvlvicÖK...Z cwiPq, cwifvlve¨envi I cÖwZeYx©KiY, bZzbcwifvlvm„wó (Neologisation)

6. evK¨: evK¨ ‰ewPÎ¨, evK¨MVb, weivgwPý, eÜbxwPýGes D×...wZcÖ‡qvM;

7. evsjvwjLb †KŠkj: cÖvwZ‡e`b, ¯§viKwjwc, Rxebe„Ëvší, wewfbœecÎ †hvMv‡hvM (Correspondence)

wØZxqcfvM :evsjvmvwnZ¨

KweZv

1. iex›`ªbv_ VvKzi: †mvbviZix(Kve¨MÖš')

2. KvRxbRiæjBmjvg: AwMœ-exYv (Kve¨MÖš')

3. Rxebvb›`vk: ebjZv †mb (Kve¨MÖš')

†QvUMí

1. iex›`ªbv_ VvKzi: AwZw_, GKivwÎ, †cv÷gv÷vi

2. gvwbK e‡›`¨vcva¨vq: cÖv‰MwZnvwmK, ^kjRwkjv

3. ebdzj: K¨vbdvmvi, gvby‡ligb, wbgMvQ, cvV‡Kig„Zy¨

Textbooks

১।সরকার, যতীন;e¨vKi‡Yিভয়অকারণ

২।আজাদ, হুমায়ুন;বাংলাভাষারজীবন কাwহনী

৩।বিশ্বাস, নরেন;বাংলাউচ্চারণঅভিধান

References (mnvqKMÖš'mg~n)

1. gybxi †PŠayix I Ab¨vb¨	evsjvfvlvie¨vKiY
2. myfvlfÆvPvh©	AvaywbKevsjvcÖ‡qvMAwfavb
3. †R¨vwZZf'lYPvKx	evsjvfvlvie¨vKiY
4. cweÎmiKvi	evsjvevbvbms¯‹vi: mgm¨v I m¤¢vebv
5. nvqvrgvqy`	evsjv †jLviwbqgKvbyb
6. gvneyeyjnK	evsjvevbv‡biwbqg
7. ‡gvnv¤§` Ave`yjKvBDg	Awfavb
8. dinv` Lvb	k‡ãiPjw"PÎ
9. mybxwZKzgviP‡Ævcvav¨q	fvlvcÖKvk ev½vjv e¨vKiY
10. kªxgYx›`ª Kzgvi †Nvl	evsjvevbvb
11. Avãyiiwng	evsjvevbv‡biK_v
12. Aiæb †mb	evbv‡biwbqg
13. evsjvGKv‡Wgx	cÖwgZevsjve¨vKiY
14. wkecÖmbœejvjwnox I Ab¨vb¨ (m¤úv:)	evsjvfvlvicÖ‡qvMAccÖ‡qvM

31

15. gbmyigymv   evsjvcwifvlv: BwZnvm I mgm¨v

II. Bangla Language Lab (**evsjvfvlvj¨ve**) (25 *marks; 1 credit hour*)

Course Contents: (**Av‡jvP¨m~Px**)
1. evMhš¿
2. evsjvaŸwb
3. D"PviY ¯'vb
4. D"PviYixwZ
5. D"PviYm~Î

mnvqKMÖš'mg~n t

1.	gnv¤§` AvãyjnvB	: aŸwbbweÁvb I evsjvaŸwbZË¡
2.	b‡ibwek¦vm	: evsjvD"PviYAwfavb
3.	gnv¤§` `vwbDjnK	: fvlviK_v
4.	iex›`ªbv_ VvKzi	: kã ZË¡
5.	iex›`ªbv_ VvKzi	: evsjvfvlvcwiPq
6.	axivb›`ª VvKzi	: evsjvD"PviY †Kvl

C-108: MATHEMATICS FOR ECONOMISTS – II

Course Objectives

This course is designed to develop fundamental knowledge of the students for the application of mathematical tools like differentiation, integration, differential equation in economics and taking proper decision in economic development. It will equip the students of economics to analyze the development problems. The course will be helped to develop an understanding of theories and practices of mathematical approach in decision making.

Course Contents

1. ***Introduction:*** Revision of some basic concepts (from C – 102), Why Economists Use Mathematics, Scientific Methods in the Empirical Sciences, the Use of Symbols in Mathematics, etc.

2. ***Equilibrium Analysis in Economics:*** Meaning of equilibrium, partial market equilibrium for linear and nonlinear model, general market equilibrium model, equilibrium in national-Income analysis.

3. ***Application of Linear Models and Matrix Algebra in Economics:*** Condition for nonsingularity of a matrix, test of nonsingularity by use of determinant, application to market and National-Income models, Leontief Input-Output models, the Jacobian, the Hessian, the discriminant, higher-order Hessians, the bordered Hessian for constrained optimization, Input-Output analysis, characteristic roots

and vectors, finite Markov chain analysis.

4. ***Comparative Statics and the Concepts of Derivative:*** Nature of comparative statics, rate of change and the derivative, derivative and slope of curve, application to comparative statics analysis, income determination, multipliers and comparative statics, income and cross price elasticity of demand, note on Jacobian determinants.

5. ***Optimization Problems in Economics:*** Optimum values and extreme values, Maclaurian and Taylor series, Taylor expansion and relative extremum, differential version of optimization, comparative static aspects of optimization, utility maximization and consumer demand, homogeneous functions, least cost combination of inputs, maximum value functions and envelope theorem.

6. ***Dynamic Analysis in Economics:*** Dynamics and integral calculus, application of indefinite, definite and improper integrals in economics, Consumers' and producers' surplus.

7. ***Differential Equation:*** Introduction and definition of differential equation, order and degree of differential equations, solution of first order and first degree differential equation, verification of solutions.

8. ***Differential Equation Problems in Economics:*** First-order linear differential equation with constant coefficient and constant term, dynamics of market price, interaction of inflation and unemployment, dynamic Input-Output models.

9. ***Optimal Control Theory:*** Nature of optimum control, maximum principle, optimization problems involving discounting, economic applications of optimal control theory.

Textbooks
1. Chiang, A. C. and K. Wainwright, 2005. *Fundamental Methods of Mathematical Economics*, 4th Edition, McGraw-Hill.
2. Dowling, E. T., 2001. *Theory and Problems of Introduction to Mathematical Economics*, Schaum's Outline Series, 3rd Edition, McGraw-Hill.

References
1. Michael Hoy, John Livernois, Chris McKenna, Ray Rees and ThanasisStengos 2011.*Mathematics for Economics*, 3rd Edition.The MIT Press, Cambridge, Massachusetts.
2. Simon, C. P. and L. Bloom, 1994. *Mathematics for Economists*, Viva Books Limited, India.
3. Dixit, A. K., 1990. *Optimization in Economic Theory*, 2nd Edition Oxford University Press.

C-120: VIVA VOCE

The end of the year viva voce shall be based on the courses taught in the respective year of studies. The School reserves the right to ask students for oral presentation on selected topic(s) of semester studies instead of viva voce, which is expected to boost

students' presentation skills and help them carry out some elementary level research on the topic(s) of presentation.

Second Year: First Semester

Courses:
201: Intermediate Microeconomics
202: Principles of Accounting
203: Principles of Sociology
204: Development Economics - I

C-201: INTERMEDIATE MICROECONOMICS

Course Objectives

This course is designed to *extend* the knowledge of students of the basic microeconomic principles – some of which they have already been introduced to, and add some additional ones. It is concerned with the behaviour of individual economic agents and their interactions i.e. how individual economic agents make decisions and how markets function. The course is expected to provide the foundation for students' future work in economics and generate insight into how economic models can help us think about important real world phenomena. Topics include supply and demand interaction, utility maximization, profit maximization, cost minimization, monopoly power, imperfect competition, factor markets, etc. All topics will be treated relatively more in-depth along with application of mathematical tools in economics.

Course Contents

1. *Preferences and Utility:* Consumer Preferences, Assumptions about Preferences, Indifference Curves, Examples of Preferences, Perfect Substitutes, Perfect Complements, Bads, Neutrals, Satiation, Discrete Goods, Well-Behaved Preferences (Include Non-Convex Preferences), the Marginal Rate of Substitution, Idea of the Utility Function, Constructing a Utility Function, Examples of Utility Functions: Perfect Substitutes, Perfect Complements, Quasi-linear Preferences, Cobb-Douglas Preferences, Marginal Utility and the MRS.

2. *Demand:* Normal and Inferior Goods, Income Offer Curves and Engel Curves, Ordinary Goods and the Giffen Goods, Price Offer Curve and the Demand Curve, Examples of Demand Curves: Perfect Substitutes and Complements, Discrete Good, Substitutes and Complements, Inverse Demand Function.

3. *Revealed Preference:* Idea of Revealed Preference, Principle of Revealed Preference, Recovering Preferences, Weak Axiom of Revealed Preference (WARP), Strong Axiom of Revealed Preference (SARP).

4. *Slutsky Equation:* The Substitution Effect, The Income Effect, Sign of the Substitution Effect, Total Change in Demand, The Law of Demand, Slutsky Substitution Effect vs. Hicks Substitution Effect, Compensated Demand Curves.

5. *Technology:*Inputs and Outputs, Technological Constraints, Examples of Technology (Fixed Proportions, Perfect Substitutes, Cobb-Douglas), Properties of Technology (Monotonicity and Convexity), Marginal Product, Technical Rate of Substitution, Diminishing Marginal Product, The Long Run and the Short Run, Returns to Scale.

6. *Profit Maximization:* Idea of Profit, Fixed and Variable Factors, Short-run Profit Maximization and Comparative Statics, Long-run Profit Maximization, Inverse Factor Demand Curves, Relation of Profit Maximization with Returns to Scale, Weak Axiom of Profit Maximization (WAPM).

7. *Cost Minimization:* Concept of Cost Minimization, Revealed Cost Minimization, Returns to Scale and the Cost Function, Long-run and Short-run Costs, Fixed/Quasi-fixed Costs and Sunk Costs, Average Costs, Marginal Costs, Relationship Between Marginal Costs and Variable Costs, Marginal Cost Curves for Multiple Plants, Long-run Costs, Discrete Levels of Plant Size, Long-run Marginal Costs.

8. *Monopoly:*Monopoly Profit-maximizing Price and Output, Linear Demand Curve and Monopoly, Markup Pricing, Inefficiency of Monopoly, Deadweight Loss of Monopoly, Natural Monopoly, Causes of Monopoly, Monopoly Behaviour: Price Discrimination, First-Degree Price Discrimination, Second-Degree Price Discrimination, Third-Degree Price Discrimination, Bundling, Two-part Tariffs, Monopolistic Competition, Location Model of Product Differentiation.

9. *Factor Markets:*Determination of input demand – Competition, Monopoly – Monopsony.

Textbook

1. Nicholson, W. and C. Snyder, 2009. *Intermediate Microeconomics and Its Application,* 11th Edition, Cengage Learning.

References

1. Varian, H. R., 2009. *Intermediate Microeconomics: A Modern Approach*, 8th Edition, Norton, W. W. & Company, Inc.
2. Pindyck, R. S. and D. L. Rubinfeld, 2012. *Microeconomics*, 8th Edition, Pearson Education.

C-202: PRINCIPLES OF ACCOUNTING

Course Objectives

This course is an introductory treatment of the field of Accounting. This is one fundamental course within the Business Studies and as such the students of development economic also need to have a principle of accounting course within their study curriculum. The objective of this course is to provide a satisfactory background in accounting principles.

Course Contents

1. ***Introduction to Accounting:*** Definition of accounting, its role and functions. Nature of accounting information, uses and users of accounting information.

2. ***The Accounting process and Accounting:*** *Cycle* Business transactions, Accountingcycle, Steps to recording process, accounting equation, the account, the rules of debit and credit, the journal, Posting to the ledger and preparation of trial balance.

3. ***The adjustment Process and rectification of errors:*** Adjusting Process: Accounting period, revenue recognition and matching principle, cash basis accounting versus accrual basis accounting. Types of adjusting entries. Preparation of Adjusted Trial Balance. Rectification of errors: Meaning, types of errors, Rectification of errors.

4. ***Accounting for different types of business concerns:*** Service providing organizationNature of services, recording process, trial balance, adjustments and preparation of financial statement; Merchandising organization Merchandising operations, merchandising transactions,Recording of merchandising purchases and sales under perpetual and periodic inventory system, trial balance, adjustments and preparation of financial statement.

5. ***Preparation of work sheet:*** Meaning, rules for preparation of work sheet and preparation of work sheet-8 and 10 columns.

6. ***Preparation of Financial Statements:*** Single and Multiple-step income statements, Owner's equity statement, classified balance sheet and cash flow statement.

7. ***Accounting Information System:*** Charts of accounts, Coding of accounts, Control accounts, the purposes of control accounts, Special journals, Advantages of special journals, Cash receipts journal, Cash payment journal, Sales journals, Purchase journal general ledgers and subsidiary ledgers.

8. ***Accounting for current assets:***

   Cash at Bank: Cash and cash-equivalent, Restricted cash, Reporting of cash, cash control system, Cash book and bank statement, bank reconciliation statement.

   Receivables: Introduction to accounts receivables and notes receivables, Valuation of accounts receivable, Uncollectible accounts receivables, Methods of determining Uncollectible accounts receivable - direct write-off method and allowances method, Accounting for previously written-off uncollectible, Discounting notes receivables – interest bearing and non-interest bearing notes receivables, dishonored notes receivables.

Textbook

1. Weygandt, J. J., Kimmel, P.D. and D. E. Kieso, 2014. *Accounting Principles*, 12th Edition, John Wiley & Sons, Inc.

References

1. Needles, B. E., Powers, M. and S. V. Crosson, 2014. *Principles of Accounting*, South-Western Cengage Learning, 12th Edition.

2. Kieso, D.E., J.W. Weygandt and T. D. Warfield, 2013. *Intermediate Accounting*, John Wiley & Sons, 15th Edition.

3. Loftus, J., et. al., 2012. *Understanding Australian Accounting Standards*, John Wiley & Sons Australia, Ltd.

4. Deegan, C., 2012. *Australian Financial Accounting*, McGraw-Hill Irwin Australia, 7th Edition.

C-203: PRINCIPLES OF SOCIOLOGY

Course Objectives

This very course will: (a) Develop a sociological perspective: sociological imagination, understanding of structure; (b) Learn content: concepts, facts, persons, theories, knowledge of sociology; (c) Develop the skills of the liberal arts: critical thinking, analysis, problem solving, communication, life-long learning, decision making, application, leadership; (d) Develop social responsibility and an ethic of service: attitudes and understandings needed to live in society as responsible citizens and to contribute to building a caring and just society; and (e) Apply sociology to social issues: social policy, social change, and social action.

Course Contents

1. *Definition, Nature and Scope of Sociology:* Origin and development of sociology as a separate discipline, relationship between sociology and other social and natural sciences.

2. *Sociological Perspectives:* Geography, Population & Environment. Functionalist, conflict and inter-actionist perspectives in sociology.

3. *Methods of Sociology:* Scientific method and techniques for sociological investigation; Basic concepts: Society, Community, Association, and Institution.

4. *Culture:* Components of culture; norms, values, folkways, etc. Cultural unity and diversity.

5. *Society and Social Process:* From early hunting stage to industrial development and globalization; Socialization - Agents of Socialization, Early development of infant.

6. *Social Institutions:* Family, Marriage and kinship, Religion, Functionalist and Conflict Perspectives of institutions; Social Stratification and class structure: Systems of Stratification, Functionalist and Conflict Perspectives of Stratification, social mobility.

7. *Population and Geography:* Population Growth, Ecological Balance, Ecosystem, Threats to global environment, and the environment: a sociological issue.

8. *Social Change:* Change and its factors, theories of social change. Social Problems: nature of social problems, social disorganization and deviant behaviour.

9. *Collective Movement:* Group, Crowd and Mob.

Textbooks

1. Schaefer, R.T. etal., 1996, *Sociology: An Introduction*, McGraw-Hill Ryerson Higher Education.   .
2. Giddens, A., 2012. *Introduction to Sociology*. W. W. Norton & Company, 8th Edition

References

1. Bassis, M.S., Gelles, R. J. and Levine, 1988. *Introduction to Sociology*. McGraw-Hill, Inc., USA., 3rd Revised Edition.

2. Robertson, Ian, 1987. *Sociology*.Worth Publishers, 3rd Edition.

3. Hughes, M. and C. J. Kroehler, 2017. *Sociology: The Core*. McGraw-Hill Higher Education, 12th Revised Edition.

C-204: DEVELOPMENT ECONOMICS – I

Course Objectives

The principal objective of the course is to introduce students to a variety of theories in economic development and the wide ranging policy issues with the aim of preparing them for advanced study and policy-oriented research in this subject area. Special emphasis will be on economy-wide aspects of economic development with reference to international dimensions of national development policy making. Students are expected to acquire the basic knowledge and skills to critically evaluate economic problems of developing countries and participate in the contemporary policy debate on the priorities of development and policy formation in these countries. Course contents will encompass topics like the meaning and measurements of development, some theories and issues of growth, poverty and distribution, theories of development, globalization, foreign aid and investment, etc.

Course Contents

1. *Meaning of Development:* Traditional and new approaches, Human Development Index (HDI), changes in the concept of development.

2. *Structures and Characteristics of Developing Countries:* Diversestructures and common features of developing countries, e.g. poverty, low income, low

standard of living - with special reference to Bangladesh.

3. *Growth, Poverty and Income Distribution:* Measurement of poverty, poverty gap and incidence, measurement of inequality- size and functional distributions of income, the interface of economic growth and poverty, and interface economic growth and income inequality.

4. *Theories of Development:* a) Theories of Dual Economy**:** Lewis, Fei-Ranis, Social Dualism - Technological Dualism and Financial Dualism; b) Modernization School**:** Rosenstein- Rodan (Big-push theory), Leibenstein's Critical Minimum Effort, Hirschman (unbalanced growth), Myrdal, Schumpeter, and Rostow.

5. *Foreign Aid and Investment:* Foreign aid, historical role, impact of aid on development, Foreign investment and the transnational corporations, technology transfer, improvement in the effectiveness of aid, and Debt crisis.

6. *Labour and Growth:* Characteristics of labour markets, labour migration – internal and external, migration and development, The problem of employment, economic models of employment determination – traditional free-market model – output and employment growth, Appropriate technology (choice of technique), and employment generation.

Textbook
1. Thirlwall, A. P., 2006. *Growth and Development – With Special Reference to Developing Countries*, Palgrave Macmillan, Eighth Edition.

References
1. Basu, K., 2003. *Analytical Development Economics – The Less Developed Economy Revisited*, MIT Press.

2. Meier, G. M. and J. E. Stiglitz, 2001. *Frontiers in Development Economics – The Future Perspective*, Oxford University Press.

3. Meier, G. M., 1989. *Leading Issues in Economic Development*, Oxford University Press, Fifth Edition.

4. Ray, D., 1998: *Development Economics*, Oxford and Princeton University Press.

5. Todaro, M P and S C Smith, 2012. *Economic Development*, 11th Edition, Addison-Wesley.

6. Cypher, J. M. and J. L. Dietz, 2009. *The Process of Economic Development*, Third Edition.

Second Year: Second Semester

Courses:

205: Intermediate Macroeconomics
206: Rural Development and Agricultural Economics
207: Public Finance
208: Government and Politics
220: Viva Voce

205: INTERMEDIATE MACROECONOMICS

Course Objectives

The goal of intermediate macroeconomics is to provide students with a rigorous overview of modern macroeconomic tools. The course builds on the themes already introduced in the principles class. The principal objective of this class is to equip students with the tools and ideas necessary to understand the aggregate economy and to make informed opinions about different economic policies. The principles course is generally aimed at an intuitive introduction to macroeconomic principles;the intermediate course should focus more on the tools of modern macroeconomics. To this end, the course should build up models of the economy resembling what might be taught in a graduate level class. Students should expect the use of some basic mathematical tools (algebraic manipulations, solving systems of equations, simple differential calculus, etc.). As modern macroeconomics is quantitative, students should also be expected to work on some quantitative exercises. In addition to learning about macroeconomic policies, an important objective of this course is to equip students with tools and training to be exposed to the research frontier. To that end, some effort should be made to expose students to modern macroeconomic research.

Course Contents

1. *Money, interest and income:*Goods market and IS curve, assets market and LM curve, equilibrium with goods and assets markets, monetary policies, Keynesian and Classical view, fiscal policy, crowing out, monetary and fiscal policy mix.

2. *Equilibrium in the open economy:* Balance of payments and exchange rates, market equilibrium and the balance of trade; capital mobility and the policy mix; perfect capital mobility under fixed and flexible exchange rates.

3. *Aggregate supply and demand:* (a) Concepts of aggregate supply and demand; monetary and fiscal policy under alternative supply assumptions; (b) neo-classical model and its amendments, notion of sticky wages, aggregate supply curve, effects of monetary expansion, supply shocks, expansions, contracts and aggregate supply.

4. *Consumption demand:* Keynesian consumption function, Kuznet's puzzle, relative, life-cycle and permanent income hypothesis.

5. *Investment spending:* residential investment; inventory investment; business fixed investment. Keynesian discounting procedures, simple acceleration and flexible acceleration principle.

6. *Inflation and Unemployment:* Classical and Keynesian theory of inflation, monetarist view of inflation, unemployment inflation-unemployment trade off.

7. *Demand for money and supply of money:* Classical quantify theory of money-Fisherian approach, Cambridge cash balance approach Keynesian approach Baumol's inventory theoretic approach, Tobin's Portfolio Theory, the money supply process, determinants of money supply, equilibrium in the money market.

8. *Policy:* Lag in the effects of policy; expectations and reactions; uncertainty and economic policy; dynamic policy and information feedback; activist vs. non-activist policy

Textbook

1. Andrew B. Abel, Ben S. Bernanke, and Dean Crushore (2009 or the latest edn.): Macroeconomics

Recommended Books:

1. Stephen D. Wiliamson (2014): Macroeconomics, Fifth Edition
2. Branson, W H (1989): Macroeconomic Theory and Policy, Second Edition
3. Dornbusch, Rudiger et al (2011): Macroeconomics, McGraw-Hill International, Eleventh Edition
4. Froyen, R T: Macroeconomics: Theories and Policies
5. Hall, R E and J B Taylor (1988): Macroeconomics: Theory, Performance & Policy, Norton, Second Edition
6. Mankiw (2008): Macroeconomics

206: RURAL DEVELOPMENT AND AGRICULTURAL ECONOMICS

Course Objectives

This course is an introductory treatment of the fields of rural development as well as agricultural economics to the students. Within the discussion of agricultural economics, students will get to learn about the economics of agricultural production, topics on production economics, and analysis of agricultural markets. On the other hand, within the discussion of rural development, rural development theory, globalization and its impact on the rural economy, grassroots rural development, rural infrastructure, migration and entrepreneurship will be discussed.

Course Contents

Rural Development

1. *Rural Development Theory:* Achieving success in rural development: tools and approaches for implementation of an integral approach.

2. *Globalization and Its Impact on the Rural Economy:* Discussion on how international trade and open economy influences rural economy.

3. *Grassroots Rural Development:* Models of grassroots development, capacity and leadership &community-based organization (CBO), self-help group, historical background of development of grassroots organization and the issue of leadership.

4. *Rural Infrastructure:* Critical requirements of rural infrastructure, and ways to address this issue

5. *Migration and Rural Development:*Resettlement, remittances and amenities, issue of rural-urban, urban-urban, urban-rural, international migration; issue of resettlements, remittances and amenities.

6. *Entrepreneurship:* Issues related to entrepreneurship development in the rural areas.

Agricultural Economics

1. *Economics of Agricultural Production:* Introduction, physical relationships: the factor-product, factor-factor, product-product relationships, economic relationships: economic optimum of factor-product, factor-factor, product-product, relationships and the general case, summary points.

2. *Topics on Production Economics:* Efficiency in resource use; technical, allocative and economic efficiency, technological change, sources of technological change, adoption and diffusion of new technologies, risk and uncertainty, duality.

3. *Analysis of Agricultural Markets:* Degrees of market competition, structure and functions of agricultural markets, market institutions, market functions, simultaneous equilibrium in two market levels, marketing margins and farm prices.

Textbooks
1. ECOSOC, 2003. *An Integrated Approach to Rural Development: Dialogues the Economic and Social Council*, United Nations Social and Economic Council.

2. Colman, D. and T. Young, 1989. *Principles of Agricultural Economics: Markets and Prices in Less Developed Countries*, Cambridge University Press.

References
1. Todaro, M. P. and S. S. Smith, 2012. *Economic Development*, 11th Edition, Addison-Wesley.
2. The World Bank (2008), *World Development Report 2008: Agriculture for Development*, Washington D.C.
3. Diakosavvas, D., Eds., 2006. *Coherence of Agricultural and Rural Development Policies*, OECD Publishing.
4. Green, G. P., Eds., 2013. *Handbook of Rural Development*, Edward Elgar.

207: PUBLIC FINANCE

Course Objectives

Issues of public finance are the crucial basis of political discourse worldwide, mainly because the principal economic function of the government involves impacting the production, consumption and distribution of output in the economy through generating resources from the people and spending these resources to improve the life of its people. However, as straightforward as the task appears to be, strong divergences of opinion on how best to raise and spend public funds on the part of the government exist in both among public and in the academia. Thus, the primary course objective is to provide students with the tools, and the techniques to use these tools, to understand the underlying concepts and practical trade-offs entailed in public finance policy alternatives. This will prepare and equip students to engage constructively in the debate on formulation, evaluation and implementation of public policy issues.

Course Contents

1. *Introduction:* Meaning of public finance, market efficiency, general equilibrium in competitive market and efficiency, allocation function, distribution function, stabilization function, coordination of budget functions, public sector in the circular flow, public sector in the national income accounts.

2. *Theory of Public Goods and Externalities:* Characteristics of public goods, pure and impure public goods, publicly provided private goods, efficiency conditions for private and public goods, private provision of public goods, externality and public sector intervention, types of externalities and inefficiency, externalities and Coase theorem, social goods and market failure, other types of market failure, provision for social goods, mixed goods, efficient provision of social goods, social goods allocation in the budget.

3. *Public Expenditure Structure and Analysis:* Theories of public expenditure, kinds of public expenditure, effects of public expenditure.

4. *Public Budget and Fiscal Policy:* Kinds of public budget: deficit, balanced and surplus budget; fiscal policy, budgetary system in Bangladesh.

5. *Taxes and Incidence of Taxes:* Desirable characteristics of a tax system (canons of taxation), principles of taxation, Factors affecting incidence of various taxes, types of taxes, elasticity and incidence of taxation.

6. *Deficit Finance:* Deficit and debts, incidence of deficit finance, choice between tax and borrowing.

7. *Public Finance in Bangladesh:* Recent trend of revenue and expenditure, analysis of budget, income inequality, public debt, fiscal policy prospects.

Textbook

1. Musgrave, A and P. B. Musgrave. 1989. *Public Finance in Theory and Practice*. Mc-Graw Hills International Editions.

References
1. Gruber, J., 2005. *Public Finance and Public Policy.* Worth Publishers.
2. Rosen, H., 2005. *Public Finance*, McGraw-Hill.
3. Browning, E.K. and J.M. Browning, 1994. *Public Finance and the Price System*, McMillan & Company.

208: GOVERNMENT AND POLITICS

Course Objectives

The principal objective of the course is to enable students to form educated judgments about politics, comparative analysis of contemporary political state, and government. It offers students an opportunity to expand their knowledge about the state and its institutions, government and public policy. This course includes a survey of different kinds of states and governments including an elaborate discussion on Bangladesh constitution and all its subsequent amendments. The course also includes a topic on the theory of public choice and the use of economic tools in dealing with traditional political problems.

Course Contents
1. *What is Political Science?*Overview, How Should We Define Politics? What is Power?

2. *Modern State:*What is the Modern State?, How Is It Different from a Nation?, How Does It Differ from Government?, Are States Becoming Obsolete? Are There Alternatives?, Do We Really Need States?, What Do States Do for Us?, Concept of a Welfare State/Socialist State – Secular State.

3. *State Organs:*Functions of the Different Organs of State– Executive, Legislature, and Judiciary, Role of political organizations in an emerging democracy (especially in the context of Bangladesh).

4. *Government:*What Makes a Government Policy Just? Are There Universal Human Rights?, What Makes a Government Policy Efficient?, What is Democracy?, What is Autocracy? What Are the Characteristics of Military States?, One Party States; Monarchies, Are Democracies Better for All States?, What is Political Authority?, What is Political Legitimacy?, What are the Demands for Democratic Citizenship?, What is Social Capital?, What is Political Culture?, What is Political Socialization?

5. *Economic Foundation of Politics:* Public Choice Theory and the Political Process, Majority Rule vs. Representative Political Decision Making, Political

Equilibrium: Use of Economic Tools in dealing with Political Issues – Individual's Most Preferred Political Outcome and Tax Policy – Decisions to or Not to Vote.

6. *Constitution of Bangladesh:*Bangladesh Constitution of 1972 and All Amendments.

7. *Types of Government:* Parliamentary Government, Presidential Government, Which System is Better?

Textbooks

1. Shively, W. P., 2008. *Power and Choice,* 11thEdition, McGraw-Hill.

2. Acemoglu, D. and J. A. Robinson. 2012. *Why Nations Fail: The Origins of Power, Prosperity and Poverty*. Crown Business.

References

1. Downs, A., 1957. *An Economic Theory of Democracy,* N. Y. Harper, New York.

2. Heilbroner, R. L., 1999. *The Worldly Philosophers. The Lives, Times, and Ideas of the Great Economic Thinkers,* Simon and Schuster, New York.

3. Weber, M., 2003. *The Protestant Ethic and the Spirit of Capitalism,* Minoela, Dover Publications, New York.

4. Constitution of Bangladesh, 1972 and Amendments.

C-220: VIVA VOCE

The end of the year viva voce shall be based on the courses taught in the respective year of studies. The School reserves the right to ask students for oral presentation on selected topic(s) of semester studies instead of viva voce, which is expected to boost students' presentation skills and help them carry out some elementary level research on the topic(s) of presentation.

Third Year: First Semester

Courses:
301: International Economics
302: Money, Banking and Finance
303: History of Bangladesh
304: Econometrics -I

C – 301: INTERNATIONAL ECONOMICS

Course Objectives

This is an introductory course in international trade and finance. The course is expected to enable students to critically analyze the issues that arise from a country's interaction with the outside world – i.e. trade with other countries, international factor movements, current account balance, exchange rate fluctuations, etc. The two broad areas of international economics are international trade and international finance. International trade analysis focuses on interaction among countries through real transactions of physical commodities. On the other hand, international finance is the monetary side of the international economics. The principal objective of the course is to help students understand the basic economic principles and theories that apply to both international trade and finance. The course will highlight topics such as issues of comparative advantage, gains from trade, and effects of trade policy interventions, arguments for and against free trade, etc. Topics on international finance will include balance of payments, determination of foreign exchange rates, international capital markets, etc. Upon completion of this course, students will be able to understand the structure and functioning of the modern international and global economy. They will be better equipped to form critical judgments and opinions about issues such as protectionism, globalization and the impact of trade on economic growth and development for countries of the world.

Course Contents

1. *Basic Concepts of International: Trade* Meaning and importance of international trade, nature and scope of global trade, modes of global trade, different moneys and fiscal policies, factor mobility, globalization: social, cultural, economic, political and ecological issues.

2. *Theories of International Trade:* Adam Smith's Absolute Advantage Theory,Ricardo's law of comparative advantage, Heckscher-Ohlin theory, factor price equalization, trade with demand and supply, production and consumption

together/without trade and with trade, gains from trade, different tastes as a basis for trade, trade affects prices and outputs, factor demand change, consumption patterns.

3. *Trade Policy:* Meaning of tariff, Effects of tariff on consumers and producers, Tariff to promote domestic production (policy of import substitution – infant industry argument), Import quota, Quota vs. tariff, Import discrimination, Trade creation and trade diversion, Non-tariff barriers to trade.

4. *Foreign Exchange:* Foreign exchange market, Nature of transactions in foreign exchange market and types of players, Uses of spot foreign exchange markets, Forward exchange rates, Forward vs. spot exchange rates, Demand and supply for a currency, Exchange rate determination.

5. *Balance of Payments (BoP):* Concept of BoP, components of BoP, and disequilibrium in BoP, causes of disequilibrium, means to correct disequilibrium in balance of payment.

Textbook

1. Salvatore, D. 2013. *International Economics*, 11th Edition. Willey, US.

References

1. Krugman,P., Obsfeld, M. and M. Melitz, 2011. *International Economics: Theory and Policy*, 9th Edition, Addison- Wesley.
2. Sodersten, B. and G. Reed, 1994. *International Economics,* 3rdEdition,Palgrave MacMillan.
3. Chacholiades, M. , 1989. International Trade Theory and Policy. McGraw-Hill Inc.

C-302: MONEY, BANKING AND FINANCE

Course Objectives

The objective of this course is to introduce students to the basic concepts of money and banking as well as Finance. These are the two principal branches of the business discipline, and an introduction to the basic issues is needed for the students.

Course Contents

Money and Banking:

1. **Money:** Definition and functions of money, Money and its relationship with Business cycles, Inflation, Interest rates and conduct of monetary policy.

2. **Demand for Money-Classical:** Equation of exchange, Quantity Theory of Money, Cambridge Approach; Keynes' Liquidity Preference theory (transaction motive, precautionary motive, and speculative motive); Friedman's modern quantity theory of money.

3. **Supply of Money:** Four players in the money supply process– i) Central Bank, ii) banks and other depository institutions and financial intermediaries, iii) depositors, and iv) borrowers. Determinants of money supply – money supply model and the money multiplier, factors that determine the multiplier.

4. **Commercial Banking:** Functions of commercial banks, credit creation & its limitations, cheque, bill of exchange, promissory note, endorsement, etc. Commercial Banking in Bangladesh, Non-bank financial institutions (NBFI).

5. **Central Banking- Regulations and Supervision:** Functions of central bank, instrument of monetary management, targets and instruments, goals of Monetary Policy (high employment, economic growth and price stability.

Finance:
1. **Introduction:** Concepts of finance and financial management, goal and functions of business finance, objective of finance, financial strategy, impact of financial markets and other external factors on a business's financial strategy, goal of finance: profit maximization vs. wealth maximization, and finance and accounting finance, ethic in business finance.

2. **Financial Environment:**Markets and institutions, financial markets, types of markets (primary and secondary markets), stock market, fiscal environment, corporate taxation, government investment policy.

3. **Concepts of Valuation, and Return and Risk:**Valuation: Time value of money, future value and compounding, present value and discounting, opportunity cost rate, fair/equilibrium value, net present value (NPV), future and present values of and annuity, perpetuities-amortized loan and amortization schedule, market value, economic value, internal rate of return (IRR) of an investment, valuation of bond and debenture, valuation of preferred stock, valuation of common stock; Return and Risk: uncertainty, risk and return, risk-free and risk-adjusted return, bond returns, return from a stock investment, types of risks (business and financial risks), total risk and specific risk, diversifiable risk and systematic risk, single-asset risk and portfolio risk, risk measurement, sensitivity analysis, scenario analysis and break even analysis, real options, decision trees, adjusted discount rate vs. certainty equivalent.

Textbooks
1. Brigham, E. F. and J. F. Houston, 2009. *Fundamentals of Financial Management*, 12th Edition, South-Western College Publishers.

2. Mishkin, F. S., 2015. *The Economics of Money Banking, and Financial Markets*, 11th Edition, Pearson.

References
1. Weston, J. F., S. Besley and E. F. Brigham, 1996. *Essentials of Managerial Finance*, 11th Edition, Dryden Press.

2. Ross, S. A., Westerfield, R. and J. Jaffe, 2003. *Corporate Finance*, 6th Edition, McGraw-Hill.

3. Brealey, R. A. and S. C. Myers, 2002. *Principles of Corporate Finance*, 7th Edition, McGraw-Hill.

4. Lewis, M. K. and P. D. Mizen, 2000. *Monetary Economics*, Oxford University Press.

5. Rose, P. S., 2003. *Money and Capital Markets: The Financial Institution and Instruments in a Global Market Place*, 8th Edition, McGraw-Hill/Irwin.

C-303 : HISTORY OF BANGLADESH

Objectives

This course has been designed to help the students in obtaining comprehensive idea about the history, culture and heritage of Bangladesh. It will introduce students to the economy, society, politics, diplomacy and foreign policy of Bangladesh. Students will learn about the challenges and potentials of Bangladesh in shaping its peaceful and sustainable future. Students learn about roles and contribution of Bangladesh in the regional and international bodies. The course covers political history of Bangladesh: ancient period, Muslim period, British period, Pakistan period; emergence of Bangladesh: proclamation of independence, liberation war, nation-building in the new state; Bangladesh politics: the ideals, philosophy and amendments of Bangladesh constitution and so on.

Course Contents

1. **Bengal:** *Ancient Period and Mughal Period* Political and Social History of Bengal in the Ancient Period, Political and Social History of Bengal during the Mughal Period.

2. **British Rule India:** *1757 – 1947* Political and Social History of Bengal during 1757 to 1857; 19th Century Bengali Renaissance, Backwardness of Eastern Bengal.

3. **1947 Partition of Bengal and the Independence of Pakistan and India:**Indian Nationalist Movement in the 20th Century. The Pakistan Movement, 1940 to 1947. Partition of British India in 1947, and the Independence of two new countries, India and Pakistan.

4. **Pakistan Period, 1947 to 1971:**Economic, Social and Cultural Subjugation of the East Pakistanis. Bangla Language Movement. 1954 Election. Martial Law Government from 1958 onwards. Six Point Demand. 1970 General Election.

5. **Liberation War and the Birth of Bangladesh, 1971:**7th March Speech of Bangabandhu Sheikh MujiburRahman. Crackdown of the Pakistani Army on March 25th onwards. Mujibnagar Government. Surrender of the Pakistani Army, first Bangladesh Government (1972–1975).

6. **Military Rules, 1975 to 1990:** *Transition to a Market Economy* Military Rules of President Zia and Ershad. Political Developments. Major Shifts in the Political and Economic Policies.

7. ***Parliamentary Form of Governments, 1991 onwards:*** Parliamentary form of governments from 1991 onwards.

8. ***Bangladesh Society Today:*** Economic and Social Indicators; MDG and SDG, War Crimes Tribunal.

Textbooks

1. Schendel, W. V., 2009. *A History of Bangladesh*, Cambridge University Press, Cambridge.

2. Muhith, A M A. 1978. *Emergence of a Nation*. Bangladesh Books International. Dhaka.

References

1. Lewis, D., 2011. *Bangladesh: Politics, Economy and Civil Society*, Cambridge University Press.
2. Novak, J. J., 1994. *Bangladesh: Reflections on the Water*, University Press Limited, Dhaka.
3. Eaton, R. M., 1993. "*The Rise of Islam and the Bengal Frontier 1204-1760*", University of California Press, Berkeley.
4. Hossain, A., et. al., 2006. *Economic Analysis of Contemporary Issues in Bangladesh*,
5. Islam, S., Eds. (1992), "*History of Bangladesh: 1704-1971*, *Vol. 2, (Economic History)*", Asiatic Society of Bangladesh, Dhaka.
6. Abdullah, A., Eds. (2001), "*Bangladesh Economy 2000: Selected Issues*", Bangladesh Institute of Development Studies, Dhaka.

C-304: ECONOMETRICS-I

Course Objectives

Econometrics deals with the application of statistical tools to economic data. An econometrician may formulate an economic relationship through simplified model of the real-world process. Estimation and testing of these models with observed data and the use of the estimated models for prediction and policy analysis are the other two major goals of econometrics. In this context, this course would help the students to develop innumerable discussions of relationship between two or more economic variables like quantity, price; consumption, income, demand for money, interest rate, etc. and using statistical inference students can also identify validity of the specific models.

Course Contents

1. ***Preliminaries:*** Definition, economic and econometric models, types of econometrics, nature, scope and division of econometrics, aims and methodology of econometric, sources of econometric data.

2. ***Two Variable Regression Analysis:*** Introduction, concept of population regression function(PRF), sample regression function, concepts of Classical normal linear regression model (CNLRM), assumptions of regression model, distribution of disturbance term, estimation procedures of regression coefficient under Ordinary Least Squares (OLS) and Maximum likelihood (ML) estimation method, standard errors of OLS and ML estimates. properties of OLS and MLE, Gauss-Markov theorem.

3. ***Multiple Regression Analysis:*** K-variable linear regression model (in matrix form), OLS and ML estimation procedures, coefficient of determination and adjusted R-square, significance of R-square.

4. ***Multicollinearity:*** The nature of multicollinearity, estimation in the presence of perfect multicollinearity, estimation in the presence of high but imperfect multicollinearity, consequences of multicollinearity, detection of multicollinearity, remedial measures.

5. ***Heteroskedasticity:*** Nature of heteroskedasticity, OLS or ML estimation in the presence of heteroskedasticity, method of Generalized Least Square (GLS), consequences of heteroskedasticity, detection of heteroskedasticity, remedial measures.

6. ***Autocorrelation:*** Introduction, estimation in the presence of autocorrelation, properties of OLS or ML estimators in the presence of autocorrelation, detecting autocorrelation, remedial measures.

7. ***Dummy Variable Regression Models:*** Nature of dummy variables, model with a single dummy variable, regression with a mixture of quantitative and qualitative regressions models, some illustrative examples of regressions on dummy variables, structural stability of regression models, Chow test, dummy variable trap, method of avoiding dummy variable trap, interaction effects using dummy variables.

8. ***Panel Data Regression Models:*** Concepts of panel data, random effect and fixed effect models, estimation of regression coefficients, SUR model, Dynamic panel data model.

9. ***Simultaneous Equation Models:*** Concepts, identification problem, test for simultaneity, tests of erogeneity, idea of structural, reduce and recursive model, variance ratio, method of estimation.

Textbooks

1. Angrist, Joshua D, and Jorn-Steffen Pischke. Mostly Harmless Econometrics: An Empiricist's Companion. Princeton, NJ: Princeton University Press, 2008.

2. D. N. Gujarati, D. C. Poter, and S. Gunasekar (2013) : Basic Econometrics, 5th Edition, McGraw-Hill Companies Ltd.

3. G. S. Maddala (2001): Introduction to Econometrics, 3rd Edition, John Wiley & Sons, Ltd.

References

1. Judge, G. G., et. al. 1980. *Theory and Practice of Econometrics*, John Wiley and Sons, Inc.
2. Wooldridge, J. M. 2005. *Introductory Econometrics: A Modern Approach*, 3rd Edition, South-Western College Pub.
3. Kmenta, J. 1986. *Elements of Econometrics*, 2nd Edition, Macmillan, New York.
4. Green, W. H. (2003): Econometric Analysis, Pearson, 8th Impression in India.

Third Year: Second Semester

Courses:

305: Advanced Microeconomics
306: History of Economic Thought
307: Population and Development
308: Labor Economics
320: Viva Voce

C-305: ADVANCED MICROECONOMICS

Course Objectives

This course has two key and complementary objectives: to advance the students' understanding of microeconomic theory beyond Principles of Microeconomics and Intermediate Microeconomics, and to further develop analytical techniques and research skills from Advanced Economic Analysis. The course covers some of the main topics of microeconomics from consumer and producer behaviour, partial and general equilibrium, oligopoly, behaviour under uncertainty, game theory and information economics. By the end of the course students will have an understanding of the nature of theoretical research and analysis in microeconomics. Students will develop skills in applying theoretical analysis to topics such as market failure and uncertainty, general equilibrium analysis, the role of government and behavioural economics.

Course Contents

1. *Uncertainty:*Expected Utility, Uniqueness of Expected Utility Function, Arrow-Pratt Measure of Risk Aversion, Global Risk Aversion, Relative Risk Aversion.

2. *Technology:*Specification of Technology, Monotonic Technologies, Convex Technologies, Technical Rate of Substitution, Elasticity of Substitution, Returns to Scale, Homogenous and Homothetic Technologies.

3. *Profit Maximization:*Concept of Profit Maximization, Properties of Demand and Supply Functions.

4. *Cost Minimization:*Calculus Analysis of Cost Minimization, Second-Order Conditions, Cost Function for the Cobb-Douglas Technology, the CES Technology, Leontief Technology, Linear Technology, Conditional Factor Demand Functions, and Algebraic Approach to Cost Minimization.

5. *Oligopoly:*Cournot Equilibrium, Bertrand Equilibrium, Quantity Leadership, Price Leadership, Collusion.

6. *Game Theory:*Description of a Game, Economic Modeling of Strategic Choices, Solution Concepts, Nash Equilibrium.

7. *Equilibrium Analysis:*Core of an Exchange Economy, Convexity, Uniqueness of Equilibrium, General Equilibrium Dynamics.

8. **Welfare:** Concept of Welfare, Welfare Criterion, Welfare Functions.

9. **Information:** Principle-Agent Problem, Full Information: Monopoly Solution, Full Information: Competitive Solution, Adverse Selection, Lemons Market, Signaling.

Textbook

1. Nicholson, W. and C. Snyder, 2012. *Microeconomic Theory: Basic Principles and Extensions*, 11th Edition, South-Western Cengage Learning.

References

1. Varian, H., 1992. *Microeconomic Analysis*, 3rd Edition, W. W. Norton & Company.
2. Mas-Colell, A., M. Whinston and J. Green, 1995. *Microeconomic Theory,* Oxford University Press.
3. Gravelle, H. and R. Reese, 2004. Microeconomics, 3rd Edition, Prentice Hall Financial Times.
4. Jehle, G. and P. J. Reny, 2011. *Advanced Microeconomic Theory*, 3rd Edition, Prentice Hall.

C-306: HISTORY OF ECONOMIC THOUGHT

Course Objectives

History of Economic Thought examines major contributions made to the field of economics by great thinkers/philosophers/economists in history. Evolution of economic thought and their applications to economic practice and policy making are compared and evaluated in judging their usefulness and efficiency in solving current economic problems and address emerging issues, especially in an increasingly globalized environment. The course surveys some of the main schools of economic thought in history, beginning from ancient- oriental, occidental and medieval economic thought to those of classical and marginal schools. It then reviews some socialist alternatives to classical theory including the challenges to the Classical school by Karl Marx.Upon completion of the course, students are expected to develop an overview of the main approaches to the history of thought; a sound knowledge of the evolution of the discipline of economics; and the ability to critically evaluate the major contributions to the theories of value, production, distribution, etc.

Course Contents

1. **Pre-Classical Economic Thought:** Ancient-oriental, occidental and medieval economic thought e.g. those of Koutilya, Greek philosophers, etc., and schools of Mercantilism and Physiocracy.

2. **The Classical School:** Adam Smith - division of labour, theory of wages, profit and interest, principles of taxation, David Ricardo - theory of rent, taxation and principle of comparative advantage, Malthus - population doctrine and its criticism, concept of utilitarianism, economic ideas of John Stuart Mill.

3. **Socialist Alternatives to Classical Theory:** Historical school of Hegel and Marx's scientific socialism, theory of surplus value, falling rate of profit, destruction of capitalism, communist manifesto, Schumpeter and capitalism, developments in Soviet economy, Chinese communism and the ideas of the Fabian society.

4. **The Marginal Revolution and Neoclassical Foundations:** the marginal concept and notions of optimization as expounded by Jevons, Menger, etc. Neo-classical foundations of microeconomics as laid down by Alfred Marshal. The general equilibrium theories of Walrus, Pareto and Leontief; Veblen and the development of institutional economics.

5. **Modern Paradigms:** Keynes' General Theory, the Keynesian-Monetarist debate and resurgence of neoclassical ideas including the supply-side economics, New Classical and New Keynesian School.

Textbooks

1. Blaug, M., 1997. *Economic Theory in Retrospect*, 5th Edition, Cambridge University Press.
2. Srivastava, S. K. 2007 (original 1961), *Atma Ram*, New Delhi.

References

1. Spiegel, H. W., 1991. *The Growth of Economic Thought*, Duke University Press, 3rd Edition.
2. Roll, E., 1992. *The History of Economic Thought*, 5th Edition, Faber & Faber.
3. Rangaranjan, L. N., Eds., 1992. *Koutilya: Arthashastra*, 6th Edition, Penguin Publishing.
4. Freedman, R., Eds., 1962. *Marx on Economics*, Pelican Books.
5. Giddens, A., 1971. *Capitalism and Modern Social Theory-An Analysis of the Writings of Karl Marx, Durkheim and Max Weber*, Cambridge University Press, UK.
6. Hausman, D. M. *The Philosophy of Economics: an Anthology*, 2nd Edition.
7. Backhaus, J. G., 2012. *Handbook of the History of Economic Thought*, Springer.

C - 307: POPULATION AND DEVELOPMENT

Course Objectives

This course is designed to enable students acquire theoretical and technical knowledge about population issues and their relationship with development. Students will learn fundamentals regarding the key components of demography:

fertility, mortality and migration and their societal implications, understand the mechanisms underlying the demographic transition theory, be able to identify and manipulate key demographic components that range from the local to the global spatial scales and for different population segments. The students will get an opportunity to learn how these demographic trends of growth and transition affect their life in the sphere of development in small and large ways. This course is intended to sharpen students' perception of population growth and change and increase their awareness of what is happening and why and to help prepare them to cope with a future that will be shared with billions more people than there are today.

Course Contents

1. ***About demography and population doctrines:*** Introduction to Demography, Demographic of Politics, Social Planning and Business, History of Population Growth, Geographic Distribution of World Population and Global Variations in Population Size and Growth, Demographic Perspectives, Pre-modern Population Doctrines.

2. ***...ographic Transition:*** Theory and itsComponents,Sources of ...ographic Data, Combining the Census and Vital Statistics.

3. ***Health and Mortality:*** Causes of Poor Health and Death, Measuring Mortality, Mortality and Inequality, Components of Fertility, Levels of Fertility, Fertility Control and Measures.

4. ***Migration, Age and Sex:***Geographic Variability, Internal Migration, Migration between Countries, Concepts of Age and Sex, Impact of Mortality and Fertility on Age, Age Transitions at Work, Impact of Mortality and Fertility on Age with reference to Bangladesh.

5. ***Population Growth and Economic Development:***Population Growth in Bangladesh, 1971- present time, Population Growth and the Rate of Savings and Investment, Population Growth and Unemployment, Population Growth and Poverty.

6. ***Challenges for Growing Population:***Use and Abuse of Resources by Growing Population, Population and Food, Human Impact on the Environment, Managing the Transitions in the 21st Century, Demographic Changes in Bangladesh and Population Dividend.

Textbook

1. Weeks, John R. (2005). Population. An Introduction to Concepts and Issues. 10th edition. Thomson Wadsworth.

References

1. Carmichael, G. A., 2016. *Fundamentals of Demographic Analysis: Concepts, Measures and Methods*, The Springer Series on Demographic Methods and Population Analysis, Springer International Publishing.

2. Furedi, F., 1997. *Population and Development: A Critical Introduction*, Polity Press.

3. Simon, J. L., 1998. *The Economics of Population: Classic Writings*, 1998, Transaction Publishers.

C-308: LABOR ECONOMICS

Course Objective

The course introduces the students to the basic theories of labor markets. It will emphasize the interaction between theory and empirics. The first part of the course is devoted to study the labor demand decisions taken by firms in competitive markets, the supply decisions taken by rational workers, and the equilibrium outcomes in such markets. It will also analyze imperfect labor markets, and covers other important topics in labor economics, e.g. human capital, wage/income inequality and the issue of discrimination. Students will develop skills in applying theoretical analysis to contemporary issues and policies related to labor market.

Course Contents

1. ***Introduction to Labor Economics:*** Basic definitions and facts. Labor economics as applied microeconomics. Labor economics and econometric methods. Labor economics and policy. (Borjas, Chapter 1)

2. ***Labor Supply:*** Why work? The neoclassical theory of labor supply. Preferences and budget constraint. Extensive and intensive margins. Estimating labor supply and elasticity. Policy applications: taxation of earnings. (Borjas, Chapter 2)

3. ***Home Production:*** Economics of the family. The multiple trade-offs of modern families. Children and parents' labor supply. Policy Application: Maternity capital. Gronau, Reuben, "Leisure, Home Production, and Work - The Theory of the Allocation of Time Revisited." *Journal of Political Economy* 85, no. 6 (December 1977): 1099–1124.

4. ***Labor Demand:*** Labor demand as a derived demand. Labor demand in the short and long run. Marshall's Rules. Policy applications: the minimum wage. (Borjas, Chapter 3)

5. ***Human Capital:*** Theory Investment in education and training. The signaling debate. Policy application: training programs. (Borjas, Chapter 6)

6. ***Labor Market Equilibrium:*** The competitive labor market. Monopsony. Policy application: the impact of immigration. (Borjas, Chapter 4)

7. ***Wage Differentials and Wage Structure:*** Compensation for risk. Policy application: why did wage inequality increase? (Borjas, Chapters 5 and 7)

8. ***Labor Mobility:*** Migration as a human capital investment. Job turnover and matching. Policy application: intergenerational mobility. (Borjas, Chapter 8)

9. ***Unemployment:*** Types of unemployment. Job search. Efficiency wages. The Phillips curve. Policy application: European unemployment. (Borjas, Chapter 12)

Textbook

1. Borjas, George J. Labor Economics. McGraw-Hill, 7thEdition, 2016. (Borjas)

References

1. G. Ehrenberg and Robert S. Smith.*Modern Labor Economics: Theory and Public Policy*, 13th Edition, 2018.
2. McConnell, Campbell R. Brue, Stanley L. Contemporary Labor Economics, 11th Edition, 2017.

C – 320: VIVA VOCE

The end of the year viva voce shall be based on the courses taught in the respective year of studies. The School reserves the right to ask students for oral presentation on selected topic(s) of semester studies instead of viva voce, which is expected to boost students' presentation skills and help them carry out some elementary level research on the topic(s) of presentation.

Fourth Year: First Semester

Courses:

401: Advanced Macroeconomics
402: Development Economics - II
403: Research Methodology
404: Econometrics - II
405: Software Applications for Economists

C-401: ADVANCED MACROECONOMICS

Course Objectives

This course is meant to provide a transition between undergraduate and graduate level macroeconomics. The prerequisites for this course are: intermediate macroeconomics, mathematical economics and basic econometrics. The course presents an in-depth analysis of modern macroeconomic theory. Topics to be discussed typically include: macro-economy both in short and long run, micro–foundation of macroeconomic theories, rational expectations, dynamic analysis, monetary policy and inflation, etc. Both basic and more advanced theoretical models and analytical techniques are widely used in the course, but are treated as tools for granting insights into important issues, not as ends in themselves.

The course will offer students an opportunity to apply the analytical tools of macro and microeconomic theory and will help him/her understand issues of unemployment, inflation, and economic growth. It will also consider such issues as the role of government, the consumer, the worker and business in the stabilization of economic activity and employment in an open economy with substantial international trade flows.

Course Contents

1. *Macroeconomy in the Long Run:*Harrod-Domar Model, Solow Growth Model, the Accumulation of Capital, Golden Rule of Capital, Population Growth, Technological Progress, Slowdown of Productivity Growth, Unemployment, Efficiency-Wage Model, Implicit Contracts, Insider-Outsider Model, Hysteresis.
2. *Macroeconomy in the Short Run:* Introduction to Economic Fluctuations, Time Horizons, Stabilization, Aggregate Demand in IS-LM Framework, Explaining Fluctuations with IS-LM, Aggregate Demand in Open Economy, Mundell-Fleming Model, Small Open Economy under Floating Exchange Rates and Fixed Exchange Rates, Models of Aggregate Supply.

3. *Micro Foundation of Macroeconomic Theories:* Keynesian Consumption Function, Intertemporal Choice, Life-Cycle Hypothesis, Permanent-Income Hypothesis, Rational Expectations and Random Walk Consumption, Consumption and Risky Assets. Investment, Business Fixed Investment, Investment with Adjustment Costs, Tobin's q, Investment with Uncertainty.

4. *Macroeconomic Policies:* Fiscal Policy, Government Debt and Budget Deficit, Traditional vs. Ricardian View, Fiscal Sustainability, Fiscal Deficit and Inflation, Top-Down Budgeting, Monetary Policy, Dynamic Inconsistency of Low-Inflation Monetary Policy, Seignorage and Inflation, Inflation in Developing Countries, Inflation Targeting, Central Bank.

Textbooks

1. Romer, D., 2001. *Advanced Macroeconomics*, 3rd Edition, McGraw-Hill Companies.

References

1. Mankiw, N. G. 2012. *Macroeconomics*, 8th Edition, Worth Publishers.
2. JEP, 1988. *Symposium: the Slowdown in Productivity Growth*, The Journal of Economic Perspectives, 2 (Fall 1988), pp.3-98.
3. Prakash, L. and P. Swagel, 2001. *Sources of Inflation in Developing Countries*, IMF Working Paper, WP/01/198, International Monetary Fund.
4. Osmani, S.R., et. al., 2003. *The Macroeconomics of Poverty Reduction: The Case Study of Bangladesh*, United Nations Development Programme, the Asia-Pacific Regional Programme on Macroeconomics of Poverty Reduction.

C–402: DEVELOPMENT ECONOMICS – II

Course Objectives

This course is a continuation of a sequence course of Development Economics. This course delves into the game theory topics (as continuation from the Advanced Microeconomics class) and develops a framework required to understand modern development economics theory. Furthermore, information economics, particularly moral hazard, adverse selection, insurance, and contract theory has been covered. The course also covers discussion on contemporary models of development, credit and new growth theories

Course Contents

1. *Further Discussions in Game Theory*: Mixed Strategies, Repeated Games, Refinements of Nash Equilibrium, Repeated Games, Sequential Games, Sub-game Perfection, Games with Incomplete Information, Bayesian-Nash equilibrium, Underdevelopment viewed as Coordination Failure within a Prisoner's Dilemma Game.

2. *Moral Hazard and Principal-Agent Problems*: The Basic Moral Hazard Problem, Contract Design with Observable Effort, Contract Design with

Unobservable Effort, Shape of the Optimal Compensation Scheme, Optimal Effort. Lemon Market: Discrete and Continuous Case.

3. ***Adverse Selection, Signaling, and Screening***: Incentives in Agency Problems, Job Market Signaling, Screening, Pooling and Separating Equilibria.

4. ***Insurance***: Perfect Insurance Model, Limits to Insurance: Information, Limits to Insurance: Enforcement

5. ***Auction Theory***:Auction Classification and Private-Value Strategies, Comparing Auction Rules, Risk and Uncertainty over Values, Common-Value Auctions and the Winner's Curse, Information in Common-Value Auctions.

6. ***Contemporary Models of Development and Underdevelopment***: Underdevelopment as a coordination failure, multiple equilibria, starting of economic development: the big push, further problems of multiple equilibria, Kremer's O-Ring theory of economic development, economic development as self-discovery, Hausman-Rodrik-Velasco growth diagnostic framework.

7. ***Credit***: Rural credit markets, theories of informal credit markets, interlinked transactions, alternative credit policies: microfinance

8. ***New Growth Theories***: Human capital and growth, conditional convergence, technical progress and human decisions, a model of deliberate technical progress, externalities, technical progress, and growth, total factor productivity.

Textbooks

1. Ray, D., 1998: *Development Economics*, Oxford and Princeton University Press.
2. Bolton, P. and M. Dewatripont, 2005, *Contract Theory*, MIT Press.
3. Varian, H., 1992. *Microeconomic Analysis*, 3rd Edition, W. W. Norton & Company.

References

1. Basu, K., 2003. *Analytical Development Economics – The Less Developed Economy Revisited*, MIT Press.
2. Meier, G. M. and J. E. Stiglitz, 2001. *Frontiers in Development Economics – The Future Perspective*, Oxford University Press.
3. Meier, G. M., 1989. *Leading Issues in Economic Development*, Oxford University Press, Fifth Edition.
4. Cypher, J. M. and J. L. Dietz, 2009. *The Process of Economic Development*, Third Edition
5. Varian, H., 1992. *Microeconomic Analysis*, 3rd Edition, W. W. Norton & Company.
6. Bardhan, P. and C. Udry, 1999. *Development Microeconomics*. Oxford University Press.
7. Todaro, M P and S C Smith, 2015. *Economic Development*, 12th Edition, Addison-Wesley.

C-403: RESEARCH METHODOLOGY

Course Objectives

This course is designed to build the foundation of scientific thinking and to understand the framework of the business research process. This will help the students to develop an understanding of research design and techniques to conduct basic qualitative and quantitative research. It will prepare the students for scholarly writing and evaluating the report.

Course Contents

1. *Research Process:* A quick glance - formulating research problem, construct instruments for data collection, selecting sample, writing a research propo: collecting data, processing and displaying data and writing research report.

2. *Identifying Variables:* Converting concepts into variables; types of variables from viewpoint of (i) causal measurement (ii) study design, and (iii) unit of measuremen

3. *Constructing Hypothesis:* Definition of hypothesis; function of hypothesis; testing hypothesis; errors in testing hypothesis and hypothesis in quantitative research.

4. *Research Design:* Study design based on number of contacts; study design based the nature of investigation; cross-over comparative experimental design; replica cross-sectional design; trend studies, cohort studies, panel studies and so on.

5. *Study Design in Qualitative Research:* Case study, oral history, focus group discussi participant observation, holistic research, community discussion forum, act research
.

6. *Methods for Data Collection:* Difference in methods of data collection in quantitat and qualitative research; major approaches to information gathering, collecting d using primary sources such as observation, the interview, questionnaire, pre-testin research instrument, using data from secondary sources.

7. *Selecting Sample:* Sampling in quantitative research – concepts of sampling, princip of sampling, types of sampling, the systematic sampling design, the calculation sample size.

8. *Collecting Data Using Attitudinal Scale:* Measurement of attitudinal scale quantitative and qualitative research; types of attitudinal scales such as Likert sc: Thurstone scale, and Guttman scale.

9. *Establishing the Validity and Reliability of a Research Instrument:* The concept validity and types of validity in quantitative research.

10. *Considering Ethical Issues in Data Collection:* Ethics-the concept; stakeholders research and ethical issues.

11. Evaluation: Evaluation of programme monitoring and planning – from differ perspectives.

12. *Sample Survey and Sampling Techniques:* Requirements of a good sample design, units; population, sampling units, pre testing, pilot survey, sampling frame and related problems, uses of sample survey, random or probability sampling and non-random or purposive sampling and sample size determination. Simple random sampling, stratification and stratified random sampling, systematic sampling, cluster sampling, sampling and non sampling errors.

Textbooks

1. Cochran, W. G. (1977) : Sampling Techniques, 3rd Edition, Wiley.
2. Kish, L.: Survey Sampling.
3. Mukhopadhyay, P., 2009. *Theory and Methods of Survey Sampling*, 2nd Edition, PHI Learning   Private Limited.
4. M. N. Islam (2005) : An Introduction to Sampling Methods Theory and Applications Book World, Dhaka.

References

1. Kothari, C.R. (2008). *Research Methodology*, New Delhi, India
2. Kumar, R. (1996). *Research Methodology- A Step by Step Guide for Beginners*, Sage, New Delhi, 1996
3. May, T. (2001). *Social Research: Issues, Methods and Process*, Buckingham: Open University Press
4. Babbie, E. (2007). *The Practice of Social Research*, Thomson Wadsworth.
5. Manuals on Excel, SPSS and E-views.
6. Ethridge, D., 2004. *Research Methodology in Applied Economics*. 2nd Edition. Blackwell Publishing.
7. Kumar, R., 2005. *Research Methodology: A Step by Step Guide for Beginners*, 2nd Edition, Pearson.
8. Angrist, J. and J. Pischke, 2008. *Mostly Harmless Econometrics: An Empiricist's Companion*. Princeton University Press.
9. Khandker, S. R., et. al., 2010. *Handbook on Impact Evaluation: Quantitative Methods and Practices*, the World Bank, Washington D.C.
10. Berg, B. L. and H. Lune, 2011. *Qualitative Research Methods for the Social Sciences*, 8th Edition. Pearson, Boston, MA.
11. Sampath S., 2001. *Sampling Theory and Methods*. CRC Press.

C-404: ECONOMETRICS-II

Course Objectives

Econometrics models always used as the statistical tools in economic data analysis. An econometrician may formulate different economic models through a simplified form in the real-world process. In these processes sometimes arisesautoregression , causality, etc. problems. For estimating and testing of these models and the uses of such models for prediction and policy analysis are the major goals of econometricians. In this context, this course would help the students to develop innumerable discussions of relationship between two or more economic/social variables and using statistical inference students can also identify validity of the specific models for taking effective decisions in the economic development of the society or country.

Course Contents

1. ***Lagged Variable Models:***Role of lag and reasons for lag, estimation of distributed Lag models, Koyck's adaptive expectation and partial adjustment model and theircombination.

2. ***Instrumental Variables:***Motivation, Multiple instruments and measurement errors, identification problem.

3. ***Errors in Variables:***Concepts of errors in variable, solution of single equation model, reverse regression, proxy variables, specification error.

4. ***Nonlinear Specifications:***Limited Dependent Variables and Maximum Likelihood Estimation, Logistic Regression, Logit, Probit, Tobit Models, Sample Selection Models.

5. ***Stationary Time Series Models:***ARMA Models, ACF, PACF, Lag Operators, Linear Difference Equations.

6. ***Multivariate Models****:* Vector Autoregression; Impulse Response Functions, Variance Decomposition, Identification, Exogeneity, Causality.

Textbooks

1. J. Johnston and J. DiNardo (1997): Econometrics Methods 4th Edition, McGraw-Hill Companies, Inc.
2. D. N. Gujarati, D. C.Poter, and S. Gunasekar (2013): Basic Econometrics, 5th Edition, McGraw-Hill Companies Ltd.
3. G. S. Maddala (2001): Introduction to Econometrics, 3rd Edition, John Wiley & Sons, Ltd.

References

1. Angrist, Joshua D, and Jorn-Steffen Pischke. *Mostly Harmless Econometrics: An Empiricist's Companion.* Princeton, NJ: Princeton University Press, 2008.
2. Judge, G. G., et. al. 1980. *Theory and Practice of Econometrics*, John Wiley and Sons, Inc.
3. Wooldridge, J. M. 2005. *Introductory Econometrics: A Modern Approach*, 3rd Edition, South-Western College Pub.
4. Kmenta, J. 1986. *Elements of Econometrics*, 2nd Edition, Macmillan, New York.
5. Green, W. H. (2003) : Econometric Analysis, Pearson, 8th Impression in India.
6. Hamilton, L. C., 2012. *Statistics with STATA: Version 12,* 8th Edition, Cengage Learning.

C-405: SOFTWARE APPLICATIONS FOR ECONOMISTS

Course Objectives

The objective of this course is to introduce the basic concepts of computer and information systems. It will introduce the students with operating systems and most commonly used office software. It will also cover the fundamental concepts, theories, practices, and management of information system in organizations.

Course Contents

1. *Introduction to Computer:* General Knowledge about Computer and Computer Techonology.

2. *Software:* Basic Classification of Software - System Software, Application Software, Operating Systems: MS-DOS, Windows, Linux; Application Packages: MS Word, MS Excel and MS PowerPoint.

3. *Statistical Packages:* Stata, SPSS, and E-Views and other relevant statistical software commonly used in economic research.

4. *Laboratory Work:* Installation of Software (OS, MS Office and others), Operating System Commands, Application Packages (MS Word, MS Power Point) and Working with Statistical Packages (SPSS, Stata, R).

Text Books:

1. Sinha, P. K., 2004. *Computer Fundamentals*, BPB Publications.

2. Norton, P., 2005. *Introduction to Computer*, McGraw-Hill

Fourth Year: Second Semester

Courses:
406: Economics of Environment and Sustainable Development
407: Economic Development and Gender Equality
408: Development Issues of Bangladesh
409: Political Economy of Underdevelopment
410: Research Report
420: Viva Voce

C-406: ECONOMICS OF ENVIRONMENT AND SUSTAINABLE DEVELOPMENT

Course Objectives

This course introduces students to the fields of environmental economics, economics of natural resources and the issue of sustainable development. Additionally this course introduces students to the issue of climate change. The objective of the course is to familiarize students with the key basic points of the fields of environmental economics, natural resource economics, sustainable development and climate change.

Course Contents

1. ***Analytical Foundation of Environmental and Resource Scarcity:*** Defining Environmental and Resource Economics; the Concept of Resources and Resource Scarcity; the Neoclassical Economic Perspective.

2. ***The Concept of Natural Resources:*** An Ecological Perspective; The Economics of Nature; the Ecosystem: Structure and Function; Eco-dynamics: succession, equilibrium, stability, resilience, complexity; the Laws of Matter and Energy; Lessons of Ecology.

3. ***Natural Resource Scarcity and the Limits to Economic Growth:*** The Malthusian Growth Doctrine, the Neoclassical Growth Paradigm, the Ecological Economics School Perspective, and the Sustainable Economic Development.

4. ***The Origins of the Sustainability Problem:*** Sustainability and Intergenerational Equity; Economic Growth with Non-renewable Resources and/or Pollution, Measurement of Sustainability and Income - theory and empirics; Environmental and Sustainability Policies, National Sustainability Policies in Practice.

5. ***Fundamentals of the Economics of Environmental Resources:*** The Economic Process and the Assimilative Capacity of the Natural Environment; Common Property Resources.

6. ***The Economic Theory of Pollution and Its Control:*** The Determinants of the Optimal Level of Pollution and their Implications; Alternative Pollution Control Policy Measures and their Implications for Growth and Equity.

7. ***Material Policy:*** *Materials, and Solid Waste* Solid Waste and Waste Disposal, Waste andRecycling; a Comprehensive Materials Policy.

8. ***Valuing the Environment:*** Environmental Demand Theory; Measuring the Costs of Provision;Total Economic Value and Benefits of Improving an Environmental Amenity; Methods: Productivity Loss, Mitigation, Travel Cost, Hedonic Pricing and Contingent Valuation, Valuation and Policy Relevance.

9. ***Climate Change***: Scientific evidence in the context of Bangladesh.

Textbooks
1. Perman, R., Ma, Y., Common, M., Maddidon D. and McGilvary, J. 2012. *Natural Resource andEnvironmental Economics.* Prentice Hall.

2. Tietenberg, T. and Lewis, L. 2011. *Environmental & Natural Resource Economics*. Addison Wesley.

References
1. Baumol, W. J. & Oates, W. E, 2000. *The Theory of Environmental Policy*. Cambridge University Press.

2. Field, B. C. and Field, M. K. 2006. *Environmental Economics*. McGraw-Hill/Irwin.

3. James R. Kahn, 2004, *the Economic Approach to Environmental and Natural Resources*. Thomson – Southwestern.

4. Kolstad, C. D. 2010. *Environmental Economics*. Oxford University Press.

5. Nick Hanley, Shogren , J. F. and White, B. 2007. *Environmental Economics: In Theory and Practice*. Palgrave Macmillan.

6. Pearce, D. & Turner, R.K. 1990. *Economics of Natural Resources and the Environment.* Harvester Wheatsheaf.

7. Scott J. Callan and Janet M. Thomas 2009. *Environmental Economics and Management*. South-Western College Pub.

C - 407: ECONOMIC DEVELOPMENT AND GENDER EQUALITY

Course Objectives
The overall objective of this course is to enable all students to learn about gender equality and its relationship with economic development. This very course will help know about gender equality in an overall context, how culture, norms and traditions have an impact on gender equality, the international legal and policy context of gender equality, understand why and how to apply a gender analysis at country and sector levels, know how to integrate gender equality in specific sectors, understand the

international normative framework and approaches to gender equality in fragile contexts, know about gender issues in humanitarian responses to emergency situations, know how to apply gender equality tools throughout the programme cycle.

Course Contents

1. ***Overview and Trends:*** Key definitions and understanding about gender and development, Patterns of gender gaps, Profiles of overlapping disadvantage, Norms and decision-making, the role of households, Key patterns and trends of women in labour force, Constraints across the life cycle in different parts of the economy.

2. ***Gender as a Development Issue:*** Understanding Flexible Gender Identities and Roles, Appreciating the Gender Impact of Sudden Economic and Social Changes, Different Approaches for Gender and Development, Basic Spatial Patterns of Gender and Development, WID to GAD.

3. ***Gender, Health and Violence:*** Health Problems vary with Life Stages, Gender patterns and issues with HIV/AIDS Infection, Violence as a Health Problem– Social, Economic and Political Causes.

4. ***Gender and Environment:*** Factors Influencing Gender Differences and the Environment.

5. ***Perceptions:*** Gender Dimensions of Natural Resource Use, Gender Impact of Pollution and Natural Disasters, Gender situation in Bangladesh.

Textbooks

1. Momsen, J., 2010. *Gender and Development*, 2nd Edition, Routledge Perspectives on Development.
2. Hayami, Y. and G. Yoshihisa, 2005. *Development Economics*, Third Edition, Oxford University Press.

References

1. Planning Commission, 2015. *Millennium Development Goals: Bangladesh Progress*
2. *Reort 2015*. The Planning Commission.
3. Th World Bank, 2012. *World Development Report 2012: Gender and Development*,
4. Wahington D.C.
5. Todaro, M. P. and S. S. Smith, 2012. *Economic Development*, 11th Edition, Addison-Wesley.
6. Jayachandran, Seema. 2014 The Roots of Gender Inequality in Developing Countries. NBER Working Paper No. 20380. Issued in August 2014 http://www.nber.org/papers/w20380.
7. Duflo, Esther. 2012. Women's Empowerment and Economic Development. Journal of Economic Literature, 50(4): 1051-79.
8. World Bank, 2011, Gender and Development, World Development Report, Overview, pp2-36.
9. Buvinic, Mayra and Furst-Nichols, Rebecca. 2014. Promoting women's economic empowerment: what works? Policy Research Working Paper 7087. Washington, DC: World Bank Group.

C-408: DEVELOPMENT ISSUES OF BANGLADESH

Course Objectives

This course introduces students to the issues related to the economic development of the Bangladesh economy. This course deals with major components of the Bangladesh economy, such as agriculture, industrial development, population growth, infrastructure development, public sector, poverty alleviation challenges and human resource development issues. The objective of the course is to train students in terms of knowledge of economic and social development challenges of Bangladesh, particularly with reference to major policy papers, such as the most recent five year plan.

Course Contents

1. *Economic Growth of Bangladesh:*Trends in Economic Growth of Bangladesh, Sectoral composition of economic growth, Future directions of the Bangladesh economy.

2. *Social and Economic Indicators of Bangladesh – Recent Trends:*Recent Trends in Social and Economic Indicators of Bangladesh with Some Cross-References to other South Asian countries. Examination of Reasons Behind Recent Relative Successes of the Bangladesh Economy as compared to her Neighboring Countries.

3. *Population Growth Issues:*Population growth projections for Bangladesh for the next few decades. Policy Responses and Debates.

4. *Agriculture, Food Security and Rural Development – Review of Policies:*Performance of the Agricultural Sector, Prospects and Challenges for Agriculture, Food Security and Rural Development.

5. *Industrial Development and Export-led Industrialization:*Policy Issues and Challenges with regards to Industrialization, Manufacturing Sector Development and Export-led Industrialization in Bangladesh.

6. *Infrastructure Development:*Bottlenecks in terms of the Infrastructural Sector and Its Development. Policy Responses.

7. *Public Sector and Its Finance:*Problems associated with the Public Sector, State-owned Enterprises (SOEs) and Public Finance. Public Debt and Deficit Financing Challenges.

8. *Poverty Alleviation and Human Resource Development:*Issues with regards to Education and Health Sectors, Quantity versus Quality Dilemmas, Prospects of Information Communication and Technology Sector.

9. *Microfinance*: The Microfinance Revolution in Bangladesh, Features, Models and Diversity of Microfinance, Microfinance Outreach, Impact of Microfinance in Bangladesh, Challenges within Microfinance.

Textbooks

1. Planning Commission, 2015, *Seventh Five Year Plan, FY 2016-2020, Accelerating Growth, Empowering Citizens*, *Final Draft*, Ministry of Planning, Government of the People's Republic of Bangladesh.
2. *Seventh Five-Year Plan, Background Papers*, Ministry of Planning, Government of the People's Republic of Bangladesh.

References

1. The World Bank, 2012, *Accelerated and Inclusive Growth Report: Vol. II (Main Report)*
2. The World Bank, 2013, *Bangladesh: Poverty Assessment.*
3. Government of Bangladesh, (Various Years), *Policy Documents*.
4. Bangladesh Economic Review, Ministry of Finance, Government of Bangladesh,Various Years.
5. BBS (Bangladesh Bureau of Statistics), Statistical Yearbooks of Bangladesh, Various Years.
6. Armendariz, B. and J. Morduch, 2010. The Economics of Microfinance, 2nd Edition, MIT Press.

C-409: POLITICAL ECONOMY AND UNDERDEVELOPMENT

Course Objectives

This course is an introduction to contemporary issues/research on the political economy of development. The various meanings of the word "development" have changed over time, but it has become shorthand for a complex set of social, economic, political, cultural and institutional transformations over the last few centuries. Some of the major questions to be addressed by the course are: why some countries are so developed and affluent while others being so poor and underdeveloped, how important is politics and history is to development, why do some governments employ policies that obstruct development, how and why international politics and political institutions determine policy choices, etc. The course will also explore the allegations that some now-developed countries do not sincerely desire to see development of the ones that are poor and underdeveloped today because it is in their "interest" to sustain the *status quo* in these countries.

Course Contents

1. **Political Economy:**Concepts and subject matters of political economy, from Political Economy to Economics—change in perspective—revival of the interest in political economy–recent and orthodox approaches to the problems of underdevelopment.

2. **Mode of Production and Production Relations:** Different modes of productions -

Slavery, Feudalism, Capitalism and Socialism, Asiatic mode of production, pre-capitalist mode of production.

3. ***The Marxist Critique of the Capitalist Process of Development:*** Theory of surplus value and the capitalist exploitation of labour; the law of falling tendency of the rate of profit, reproduction models, the Marxist prognosis of the capitalist development; dialectic materialism; Marx and Engels on socialist transformation of capitalist economy; the socialist mode of production and distribution.

4. ***Politics and Society in the Third World:*** Marxist theory of imperialism: Rising bourgeoisie class in developing countries with reference to Bangladesh.

5. ***Dependency Theory and the World System Analysis:*** Debate between development school and underdevelopment school: Baran; Sweezy, Frank, Wallerstien, Emmanuel, Samir Amin, HamzaAlavi, etc.

6. ***Post-colonial theory of global exploitation:*** Ideology of international development, monopolistic exploitation globally, Is capitalism fit for the Global village? Transformation.

Textbooks

1. Namkoong, Y., 1999. *Dependency Theory: Concepts, Classifications, and Criticisms. International Area Studies Review*, 2(1), 121-150.
2. Brewer, Anthony, 1990. *Neo- Marxist Theories of Imperialism*, Routledge.

References

1. Howard, M. C., and J. E. King, 1988. *The Political Economy of Marx*. NYU Press.
2. Howard, M. C., and King, J. E., 1992. *A History of Marxian Economics* (Vol. 2,). Macmillan.
3. Ghosh, B. N., Eds., 2001. *Contemporary Issues in Development Economics*. Routledge.

C-410: RESEARCH REPORT

Objectives

The objective of this course is to systematically compile a report on any relevant topic. This course will help the students to practice how to analyze data on some selective issues following a systematic research procedure and communicate information through compiling those all. Students will learn through this exercise/course that research reports can cover a wide range of topics, but usually focus on transmitting information with a clear purpose, to a specific audience. Also they will learn that good research reports are documents that are accurate, objective and complete.

Each student will choose a topic of her/his interest in development economics and work on a project under the supervision of an instructor. The topic has to be selected in consultation with and approval of the assigned instructor. The final work of her/his research project has to be duly submitted to the respective instructor before the start of the semester final examination.

C - 420: VIVA VOCE

The end of the year viva voce shall be based on the courses taught in the respective year of studies. The School reserves the right to ask students for oral presentation on selected topic(s) of semester studies instead of viva voce, which is expected to boost students' presentation skills and help them carry out some elementary level research on the topic(s) of presentation.

Part IV

OTHER PLANNED PROGRAMMES

4.1 MPhil & PhD Programmes

Demand for highly trained economists in a growing economy like Bangladesh is increasing day by day. Due to many emerging challenges pertaining to economic activities, particularly in the perspective of socio-economic and environmental issues, multi-disciplinary treatments linking economic, environmental and socio-cultural approaches are gaining increasing importance. This demands more economists from a multi-disciplinary background who can effectively face such challenges for the economy. Similarly, many budding economists of the country due to lack of opportunities (e.g. finance, family engagement, etc.) may also find the research degree programmes (MPhil and PhD) of Dhaka School of Economics highly suitable.

Dhaka School of Economics intends to give special focus on contemporary economic issues and emerging challenges in its research programmes which would pave the way for achieving some paradigm changes in our traditional development thinking in economic and development policy making. The school is indomitable to make it a 'centre of excellence' in research and teaching.

Besides its highly experienced and dedicated faculty members, the members of its academic council will also oversee the overall progress of the programmes. Understandings with renowned universities from home and abroad will also be explored and research scholars will be encouraged to participate in international conferences, seminars, workshops and short-training programmes and produce journal articles for refereed journals.

4.2 Other Anticipated Masters Programmes

Dhaka School of Economics will leave no stone unturned to make it a 'Centre of Excellence' in higher education in economics in the line of LSE or Delhi School of Economics (DSE). Apart from the currently offered two post graduate programmes, the school is also trying to get a positive node from the University of Dhaka for opening more postgraduate programmes in economics, particularly programmes like Masters in International Economics, Masters in Quantitative Economics, etc.

4.3 Diploma/Certificate/Training Programmes

Dhaka School of Economics (DScE) also intends to offer certain specialized certificate and diploma programmesin the area of environmental economics, applied econometrics, computer applications in economics, economics of climate change and many other related fields given approval from the University of Dhaka. Such programmes will be designed keeping in mind especially the demand for many professionals who need to be up-to-date on emerging issues and the need of those who are engaged in economic research, teaching or other areas of applied economics to improve their capabilities.

Part V

Publication

5.1 Books/Reports/Seminar Proceedings

Dhaka School of Economics aspires to publish quality research reports, books and seminar proceedings besides publishing its own journal and quarterly campus magazine on a regular basis to promote research, publication and dissemination in the area of economics and allied subjects. It has already published a number of special reports based on the papers presented on various economic issues of importance in a national workshop organized by Dhaka School of Economics in association with Bangladesh Economic Association (BEA) and Palli Karma-Sahayak Foundation (PKSF) in April 2011, titled: "Bangladesh—A Country of Middle Standard of Living by 2021: Pathways, Potentials and Challenges". Besides these, a few Working Papers have already been published and it intends to publish selected articles as seminar proceeding in an edited volume soon. In addition to these, it will also publish research reports based on the on-going research projects in due course of time.

It is also expected that DScE will regularly publish works mainly produced by the faculty members, people associated with DScE or other renowned economists, not only to produce its own research works in published forms but also to encourage scientific and quality research in economics as well as multi-disciplinary approaches in the perspective of changing economic environment. In this regard, the school also wants to set up its own publication brand titled "Dhaka School of Economics Press Limited".

5.2 Journal

Without having a refereed journal published under the banner of any school of economics, it appears quite intangible to achieve the target of becoming a 'centre of excellence' in a discipline like economics as encouraging research and getting them published in a systematic and scientific manner should be an integral part of an institute of higher education like a school of economics. From this realization, Dhaka School of Economics has already joined forces with Bangladesh UnnayanParishad (BUP) to parting the BUP "*Asia Pacific Journal on Environment and Development*". The journal publishes original research and review works on contemporary environmental and development issues with a special focus to developing country problems. It is expected that this would

not only benefit scholars, students and faculty members of DScE, but will also provide a platform for development researchers from around the world to get their works published for wider dissemination. A highly experienced and dedicated editorial panel, drawing from around the world with diverse backgrounds and multidisciplinary expertise and headed by Dr. QaziKholiquzzaman Ahmad, is the real strength of the journal. It is thus desired that the journal will continue publishing high quality research works and to promote and encourage research for wide dissemination.

5.3 Quarterly Campus Magazine

The School publishes its 'Quarterly Newsletter', mainly to encourage students and scholars to get familiar with and excel in writing in economics. Under the guidance of experienced faculty members and an advisory board, the magazine publishes short essays, research reports, news and views on economic, environmental, development and other multi-disciplinary issues of interests. The magazine also publishes news and updates on students' research activities, works presented in seminars and workshops and on cultural activities of the school. Students are strongly encouraged to contribute to the magazine on a regular basis.

PartVI

EXTERNAL COLLABORATION/ASSOCIATION

6.1 Institutional/Academic Collaborations

Dhaka School of Economics is expected to sign memorandum of understandings (MoUs) with many esteemed and renowned educational and research institutes from home and abroad. Building of working relationship with institutions like London School of Economics and Political Sciences (LSE), South Asian University, New Delhi, among others, is now under consideration.

Apart from this, it has also been working closely with many development organizations from a sense of social engagement and practical experience-based education. The school provides able guidance and support to the Government of Bangladesh through policy analysis and advisory services. It also organizes conferences and workshops on diverse subjects on a regular basis to debate, identify and highlight important policy issues.