

# “Master of Mathematics Education”

(EQUIVALENT TO M.Sc. MATHEMATICS EDUCATION)

A 2-year Joint Degree Programme

(UNDER META UNIVERSITY CONCEPT)

by

University of Delhi

&

Jamia Millia Islamia



## “MASTER OF MATHEMATICS EDUCATION”

### Syllabus

#### I.1 Seeing the World through Calculus: First Steps

Calculus is the most powerful tool in mathematics with widespread applications. The pedagogy of this paper is “*think and then do*”. The paper builds up on the topics, namely limits and continuity, differentiation and integration and then move on to more advanced applications in real life problems.

##### Topics and Applications:

1. Continuous compounding of interest, finding the circumference of circle from an  $n$ -polygon inscribed in it, calculating the value of pi through limits, understanding of the ideas of limits and continuity graphically, calculating limits at infinity, indeterminate forms, special limits involving exponential and logarithmic functions, asymptotes.
2. Improved facility in algebraic manipulation, graphing of quadric surfaces.
3. Comparing the graphs of a function, its first derivative and its second derivative, sketching curves, solving optimization problems, fluency in differentiation, concavity and inflexion points, how derivatives affect the shape of the graph.
4. Modeling average speed of traffic, temperature, population, etc., computing future value

of a continuous income flow, flow of blood through an artery, fluency in integration, integration as a limit of a sum, volume of a frustum of a cone, cap of a sphere, volume of earth (not as a sphere but as an oblate spheroid).

5. Staggered start of a race, Gabriel's horn (finite volume but infinite surface area), parametric equations of curves, arc length and surface area.
6. Path of a projectile, Kepler's laws of planetary motion, and introduction of Vector valued functions, differentiation and integration of vector valued functions.
7. Derivation of Newtonian formula of kinetic energy from Einstein's special theory of relativity, modeling of a simple pendulum, understanding the ideas of sequences, infinite series including Taylor approximations.
8. Topographic maps, isothermal surfaces, functions of several variables, level curves and surfaces, limits and continuity of functions of two and three real variables, partial differentiation (two variables), partial derivative as a slope, partial derivative as a rate.

### Readings

- T. M. Apostol *Calculus*, Volumes 1 and 2, Wiley Eastern, 1980.
- Hughes-Hallett et al., *Calculus - Single and Multivariable*, John-Wiley and Sons, 2003.
- James Stewart, *Calculus*, Thomson, 2003.
- G. B. Thomas and R. L. Finney, *Calculus and Analytic Geometry*, Addison-Wesley, 1998.

### Internet Resources

1. <http://academicearth.org/subjects/mathematics/category:107>
2. <http://academicearth.org/subjects/mathematics/category:109>
3. <http://www.intmath.com/applications-differentiation/applications-of-differentiations-intro.php>
4. <http://www.math.scar.utoronto.ca/calculus/redbook/>
5. <http://www.analyzemath.com/calculus.html>
6. <http://web.monroecc.edu/calNSF/>
7. <http://www.math.dartmouth.edu/~klbooksite/>

## I.2 School Curriculum: Concept, Processes and Assessment

The broad aim of this course is to promote enquiry into the rationale which underlies curriculum selection and legitimization of formal curriculum content. It further facilitates the student-teacher's thinking on social influences on curriculum change, and on matters of planning and implementation. The student-teacher is encouraged to pursue the questions of balance, integration and choice which relate to the curriculum as a whole. It also enables the student-teacher to understand and carry out assessment effectively. The component on assessment

focuses on classroom-based assessment as well as end-of-term tests. The student-teacher will be enabled to carry out informal assessment in actual contexts such as portfolios, journals, self and peer assessment, as well as paper-pencil tests.

*Curriculum and Pedagogy:* Introduction to the debates on local versus national curriculum; the concept of a National Curriculum Framework rather than a National Curriculum, to help establish uniformity of democratic and secular norms, with the flexibility of approach and local contextuality. Understanding the ideological relationship between knowledge selection, power and curriculum; observing and analysing pedagogies in schools that help meaning-making through processes of scaffolded learning and active peer-interaction, rather than passive listening and rote learning of information.

*Language Issues:* Understanding linguistic plurality as an educational resource not a ‘problem’; the hegemony of the ‘dialect-language’ myth; socio-historical and political developments around Hindi versus Hindustani, as an ‘official’ rather than a ‘national’ language; the need for national and emotional integration through the ‘three-language formula’, the reasons for its failure across states. Bilingualism or even multilingualism as a resource in the classroom; the necessity of teaching in the mother tongue at the primary level, and appropriate mediums of instruction at the secondary or higher levels of education; understanding the impact of the ‘conversational-formal’ language divide on schooling, and the need for learner-friendly/popular terminologies.

*Practicum: Observations and recordings of a school and classroom* - on issues related to pedagogy and textbooks; children’s home languages and how they cope with the formal language of school; differential teacher-student interactions depending on teachers’ expectations of ‘backward’ or ‘bright’ students, including the role of gender, caste, religion and economic background.

## **Curriculum: Concept and Processes**

### **Curriculum Concept**

- Analysis of curriculum as intent and as reality; curriculum as the reflection of educational ideas and aspirations to be operationalized; curriculum as means to provide experiences to realize educational proposal into practice.

### **Curriculum Content**

- Analysis of assumptions: the nature of knowledge, the nature of the child and the nature of the society.
- Debate on what and whose knowledge to be ‘worthwhile’ – and pursued.
- Debate on competing conception of balance and development of individual needs and the needs of the society.

### **Curriculum Development**

- Analysis of models: ‘Objective model’ and Process model’.
- Approaches to curriculum development: Role of central and state governments of India.
- Centralised and de-centralised curriculum development

### **Curriculum Assessment**

- Evaluation of curriculum as a whole
- Assessment of courses and curriculum material

- Tools of assessment

## **II.1 Does Nature play Dice? The Amazing World of Probability and Statistics**

Uncertainty prevails in decision making, in testing compatibility of samples, and everywhere in day to day life. This paper aims to provide the basic understanding of the subject and the tools used to understand these uncertainties. The student will be able to fit, interpret, diagnose and predict simple real life models involving probability and statistics.

### **Topics and Applications:**

Sampling distributions, hypothesis testing, interval estimation, likelihood, analysis of categorical data, joint, marginal and conditional distributions, ANOVA and regression.

Computer program R and its application to simple models.

Statistical procedures and their implementation through the statistical package R, sampling distributions and randomness, likelihood analysis, bivariate, marginal and conditional distributions, curve fitting, linear regression, test statistic and their significance.

### **Readings**

- B. Bowker and G.J. Liberman, *Engineering Statistics*, Asia, 1972.
- R.V. Hogg and E.A. Tanis, *Probability and Statistical Inference*, Macmilan, 1983.
- N.L. Johnson and F.C. Xeen Leone, *Statistics and Experimental Design in Engineering and the Physical Sciences*, Vol. I and II, , Wiley Interscience, 1977.

### **Internet Resources:**

1. <http://www.intuitor.com/statistics/>
2. [http://wiki.stat.ucla.edu/socr/index.php/Probability\\_and\\_statistics\\_EBook](http://wiki.stat.ucla.edu/socr/index.php/Probability_and_statistics_EBook)
3. [http://www.ebook3000.com/A-Modern-Introduction-to-Probability-and-Statistics\\_20862.html](http://www.ebook3000.com/A-Modern-Introduction-to-Probability-and-Statistics_20862.html)

## **II.2 Mathematics, Curriculum, Pedagogy and Evaluation**

Mathematics has the distinction of being a discipline of dual nature. It is a subject that organizes and structures human experience in terms of quality, shape and other logical relations. On the other hand, it is a discipline that is construct of created system (such as number systems) with well defined rules to operate on such systems. It is important that pre-service teachers must

understand and appreciate the dual nature of mathematics and its implication in teaching and learning of classroom mathematics.

Also, there is a dual aspect of the nature of mathematical learning. It is an individually constructed cognition activity as well as a process of social acculturation. It is important that students must be allowed the opportunity to explore and engage in both kinds of mathematical learning activity.

### **Vision**

The vision of the course is to prepare knowledgeable, thoughtful, creative and reflective mathematics teachers who can make mathematics meaningful and enjoyable for learners alongwith constructing in depth knowledge of perspective-building in this field.

## **Pedagogy of Mathematics**

### **Course Objectives**

1. To develop understanding of dual nature of mathematics.
2. To explore structurisation in mathematics.
3. To appreciate mathematics as an academic discipline focusing on continuum of aims.
4. To construct in-depth knowledge of mathematics curriculum in Indian context.

### **Section I: Realm of Mathematics**

1. Dual Nature of Mathematics: from cognitive to social
2. Structurisation in Mathematics: Axiom, Postulate, Mathematical Statement, Theorem and Proof.
3. Mathematics as an academic discipline

### **Section II: Mathematics Curriculum: Theory and Practice**

1. Understanding aims of teaching mathematics as continuum from narrow aims to higher aims
2. Organisation of Mathematics Curriculum (in the light of latest NCF, Position Paper on Teaching of Mathematics with special focus on twin premises of learning mathematics and universalization of schooling), Recent Trends in Mathematics Curriculum.

Practicum: (Any Two)

1. Reviewing historical development of mathematical concepts (Reading biographies of mathematicians including woman mathematicians)
2. Exploring axiomatic system in different domains of mathematics, viz, algebra, number system, geometry.
3. Analysing proofs of theorems in elementary geometry
4. Small scale project on Teacher's perception on aims of teaching mathematics and its transaction.
5. Detailed analysis of Position Paper on Teaching of Mathematics ( latest NCF).
6. Critical review of Issues related to problems of teaching of mathematics (reference: library, research work, internet web resources, newspapers and other documentaries)

### **Section III: Understanding Mathematics Pedagogy**

#### **Course Objectives**

1. To develop understanding of concept formation in mathematics stressing thinking strategies.
2. To make use of problem-solving approach in mathematics.
3. To extend the idea of Maths lab using activity-based learning.
4. To have deep insight into issues related to mathematics assessment.
5. Process of concept formation and concept attainment in mathematics with special focus on Bruner's Concept Attainment Model.
6. Mathematics as problem solving.
7. Activity-based learning in mathematics.

### **Section IV : Enrichment and Evaluation**

Developing Mathematical Community in Classroom through peer tutoring, mentoring, cooperative learning.

1. Developing mathematical disposition among learners through stimulation and building mathematical connections.
2. Understanding evaluation cycle and issues related to mathematics assessment.

#### **Practicum : (Any Two)**

1. Small scale action research/cases study/project on problem solving strategies used by students in mathematics.

2. Extending concept of Math lab in the immediate environment including school premises.
3. Developing technology-based learning material in mathematics, viz, multimedia presentations, transparencies, video clips, programme material.
4. Establishing Math-club in the Deptt./College/School and organizing various mathematical activities.
5. Preparing working model/web chart/ project integrating mathematics with other disciplines.
6. Developing a diagnostic test for any of mathematical concept.

### **Reading List**

- Abbot, P. (1970): Teach Yourself Geometry, London: ELBS.
- Aggarwal, S. M. , (1985): Teaching of Mathematics, Delhi, Dhapat Rai and Sons.
- Bassler, Otto C. and John R. Kolls (1971): Learning to teach Secondary School Mathematics, Scranton, Padtext Educational Publishers.
- Bell E. T. (1940) : The Development of Mathematics, New York, McGraw Hill.
- Burton, David M (1985): The History of Mathematics Boston, Allyn and Bacon.
- Butler and Wren (1965): The Teaching of Secondary Mathematics, London, McGraw Hill.
- Butler G. H., Wren F. L. (1965): The Teaching of Secondary Mathematics Germany, McGraw Hill.
- Cooney, T. J. and Others (1975): Dynamics of Teaching Secondary School Mathematics, Boston: Houghton Mifflin.
- Courant R., Robbins H. (1963): What is Mathematics? Oxford University Press.
- Current and Previous NCF, and Position Paper by National Focus Group on Teaching of Mathematics, NCERT, Delhi.
- de ykxr ds f'k{k.k lk/kuksa dh iqfLrdk (1988): CIET, NCERT, Delhi.
- Dean, Peter G. (1982): Teaching and Learning Mathematics: London Wodburn Press.
- Harmeling, H. (1982): Developing Skills in Algebra, Toronto: Allyn and Bacon.
- Iglewicz, Boris and Stoye, Judith (1973): An Introduction to Mathematical Reasoning, New York : The MacMillan Co.
- Kapfer, Miriam B. (1972): Behavioural Objectives in Curriculum Development : Selected Readings and Bibliography. Englewood Cliffs, NJ : Educational Technology.
- King P. P. (1993) : The Art of Mathematics Plenum Press.
- Knitzer, Carol A. (1983) : Making Mathematics Fun, New York : Parker Publishing Company.
- Macnab, D. S. and Cumins, J. A. (1986): Teaching Mathematics, 11 – 16, London : Basil Blackwell.
- Mager, R. (1962): Report, Preparing Instructional Objectives, Palo Alto, C A : Fearon.

Manual of Mathematics Teaching Aids for Primary Schools, CIET, NCERT, Delhi 1995.

NCERT Textbooks in Mathematics from Class VI to XII.

Polya, G. (1957): How to solve it, Garden City, New York: Dobleday.

Polya, G. (1962), Mathematics Discovery, Vol. I & II, New York, John Wiley and Sons.

Resource Materials for Mathematics Club Activities, CIET, NCERT, Delhi 1995.

Roblyer, M. D. (2008): Integrating Educational Technology into Teaching, New Delhi, Pearson Education India.

School Mathematics Project : SMP Teacher's guides for Books, E. R. and G. London: Cambridge University Press, 1972.

Servas, W. and Varga, T. Teaching School Mathematics – UNESCO Source Book.

Sidhu, K. S. (1986) : Teaching of Mathematics, New Delhi, Sterling Publishers.

Singh, H. and Singh V. P. (2005): A Handbook for Designing Mathematics Laboratory in Schools, NCERT, Delhi.

State Textbooks in Mathematics of Northern Region from Class VI to XII.

Wilder R. K. (1952) : Foundations of Mathematics, New York, John Wiley and Sons.

### **Periodicals**

Journal of Research in Mathematics  
Mathematics Teaching  
School Science and Mathematics  
The Mathematics Matter

## **II.3 English Language Proficiency Course**

### **Background**

Many students, both undergraduate and post-graduate, in Delhi University have poor English language proficiency. They are not able to use language skills with ease or at the required level, i.e. they cannot read, write, speak or listen in academic or social contexts. One of the reasons for this is that these students have had Hindi (or other regional languages) as their medium of instruction up to the school level or have been in not-so-good private schools where although the official language of instruction is English for their day-to-day and classroom purposes, Hindi is the lingua franca. Also, the exams at Class X and XII levels demand very little by way of students' own language in these four skills. Although they are required to write answers to questions in their tests and exams, since a large part of it is memory based, students are never or very seldom required to demonstrate their reading or writing ability. Oral skills are almost never taught or tested.

Therefore when a student enters the University, his/her poor language ability acts as a deterrent in their studies and holds them back from further improvement. As a result, they are neither able to participate in classroom activities nor do any reading or writing related to their subjects with any competence or confidence. This problem needs to be addressed seriously so that they are not at a disadvantage compared to those whose English proficiency is better. They will need to be equipped with language skills as well as with strategies that will help them to learn on their own

so that they can cope with the demands of their programme of study and with their future job-related activities. Therefore it is suggested that a non-credit course be offered to all those who would like to become more proficient in English, alongside their regular course work.

**Aims of the Course:** The non-credit course in English aims to:

- Improve students' language skills, i.e. reading, writing, speaking and listening. This will in turn help them to gain confidence in dealing with new situations- academic as well as social. Further, this would enhance their reference skills and study habits resulting in better scores in the University exams.
- Help them to perform better in post-university activities

The **English Language Proficiency Course (ELPC)** aims to enable students to improve their ability to speak, read, listen and write in English.

**General Objectives:** The course will give students practice in using English in a wide variety of contexts relevant to work, study and social activities. It will specifically help students to

- Understand and respond to spoken language
- Learn how to speak fluently and use appropriate expressions
- Read and comprehend different kinds of texts for different purposes
- Write coherently and effectively in formal and informal contexts.

### **English Language Proficiency Course (Basic Level)**

The Basic Course is for those who have a preliminary knowledge of the English language, and cannot use it even in every day, familiar contexts. Students' level of proficiency will be ascertained through a placement test administered at the beginning of the course so that they can be placed at an appropriate level.

### **Specific Objectives:**

At the **Basic Level**, the candidate has a preliminary knowledge of the English language and is able to read, write, listen and speak with minimum competence in familiar contexts relevant to work, study and social activities.

More specifically the candidate is able to:

- Understand and respond to spoken language: simple instructions, announcements, directions, requests for information.
- Speak briefly about themselves, people, events, incidents, processes.
- Comprehend short, written texts of different types (notices, advertisements, simple descriptions) to get relevant information.
- Write short messages, notes, letters, coherently, given some support

### **Materials**

This course will be task-based. There will be no prescribed textbook for the course but a loose-leaf booklet from which texts and tasks will be drawn. Activities will include comprehension questions, reference and vocabulary questions, discussion questions, note-making and writing exercises, and activities for discussion and interaction through role-play, pair and group work. All the exercises/activities will be provided as handouts/worksheets which can be neatly filed.

This course is characterized by the following specific features: (i) it is student centred in that the teacher provides opportunities for learners to read, write, speak and listen by teaching them different strategies, instead of explaining things in simpler English or in L1, gives over the task/activity to students so they can gradually become autonomous learners; (ii) the task carried out by the students individually, in pairs or groups will be monitored continuously and feedback given for them to improve. Thus ongoing evaluation is an integral part of this course; (iii) while the face-to-face contact is 80 hours, it will be mandatory for students to put in a minimum of 30 hours in practising these skills in their own time; these home-tasks will also form a part of their internal assessment; without this kind of learner investment, a language proficiency course is not likely to achieve the desired objectives. Further, in writing and oral presentations, good organization and coherence (and communication of meaning) are emphasized as opposed to producing grammatically correct sentences alone.

### **Course Evaluation**

The evaluation pattern will be the same as for other courses in the University. However, since there is equal emphasis on oral skills and on reading and writing, the final exam will provide for the assessment of these as well. The pattern suggested is the following:

***Internal Assessment:*** The work done will be equally divided among the four skills in the form of home assignments, class-participation, quizzes, group work and presentations. A minimum number of each of these will be decided. Many of these activities can be carried out during tutorials with the teacher-student ratio in the range 1: 5/6.

***Final exam:*** There will be no 'seen or rehearsed' texts/questions that students can reproduce from memory in their examination. The questions in tests/exams will require students to demonstrate their ability to read, write, listen and speak in new situations.

Final tests will be held on two days to test the following skill areas: **Reading, Listening,**

**Writing:** Day 1

**Speaking:** Day 2

### **English Language Proficiency Course (Intermediate Level)**

The **English Language Proficiency Course (ELPC)** aims to enable students to improve their ability to speak, read, listen and write in English.

**General Objectives:** The course will give students practice in using English in a wide variety of contexts relevant to work, study and social activities. It will specifically help students to

- Understand and respond to spoken language
- Learn how to speak fluently and use appropriate expressions
- Read and comprehend different kinds of texts for different purposes
- Write coherently and effectively in formal and informal contexts.

The Intermediate Course is for those who are fairly confident of using the skills of listening, speaking, writing and reading for different purposes at a relatively high level. Students' level of proficiency will be ascertained through a placement test administered at the beginning of the course so that they can be placed at an appropriate level.

**Specific Objectives:** At the **Intermediate Level**, the candidate will have adequate competence in the English language to be able to read, write, listen and speak in familiar contexts relevant to work, study and social activities.

More specifically the candidate will be able to:

- Understand and respond to spoken language (instructions, directions, requests for information, dialogues, etc.) and take notes on structured speeches, short lectures on familiar topics.
- Speak about themselves, people, events, incidents and express feelings and opinions.
- Read texts of different types (articles, reports, narratives, etc.) and understand / infer ideas / meanings from the context.
- Write clear, coherent texts (short articles, reports, descriptions, formal and informal letters, etc.) on familiar topics describing experiences, expressing opinions and giving convincing reasons to support the argument.

### **Materials**

This course will be task-based. There will be no prescribed textbook for the course but a loose-leaf booklet from which texts and tasks will be drawn. Activities will include comprehension

questions, reference and vocabulary questions, discussion questions, note-making and writing exercises, and activities for discussion and interaction through role-play, pair and group work. All the exercises/activities will be provided as handouts/worksheets which can be neatly filed.

This course is characterized by the following specific features: (i) it is student centred in that the teacher provides opportunities for learners to read, write, speak and listen by teaching them different strategies, instead of explaining things in simpler English or in L1, gives over the task/activity to students so they can gradually become autonomous learners; (ii) the task carried out by the students individually, in pairs or groups will be monitored continuously and feedback given for them to improve. Thus ongoing evaluation is an integral part of this course; (iii) while the face-to-face contact is 80 hours, it will be mandatory for students to put in a minimum of 30 hours in practising these skills in their own time; these home-tasks will also form a part of their internal assessment; without this kind of learner investment, a language proficiency course is not likely to achieve the desired objectives. Further, in writing and oral presentations, good organization and coherence (and communication of meaning) are emphasized as opposed to producing grammatically correct sentences alone.

### **Course Evaluation**

The evaluation pattern will be the same as for other courses in the University. However, since there is equal emphasis on oral skills and on reading and writing, the final exam will provide for the assessment of these as well. The pattern suggested is the following:

***Internal Assessment:*** The work done will be equally divided among the four skills in the form of home assignments, class-participation, quizzes, group work and presentations. A minimum number of each of these will be decided. Many of these activities can be carried out during tutorials with the teacher-student ratio in the range 1: 5/6.

***Final exam:*** There will be no 'seen or rehearsed' texts/questions that students can reproduce from memory in their examination. The questions in tests/exams will require students to demonstrate their ability to read, write, listen and speak in new situations.

Final tests will be held on two days to test the following skill areas: ***Reading, Listening,***

***Writing:*** Day 1 ***Speaking:*** Day 2

## III.1 Discretizing and Understanding Real Life Situations through Mathematical Lens

In modern world, most jobs involve interaction with computers. The computing and embedded systems technologies break additional barriers; even the day to day life and common activities now involve interacting with a computing device.

### Topics and Applications:

*Combinatorics:* Sets, counting of sets; Permutation, Combination; Inclusion- exclusion, Stirling formula; Set partition- Bell number; Idea of generating function, Catalan number.

Fisher's inequality; Steiner triple system; Coding and error detection – Hamming distance, hamming code and Sphere-packing bounds.

*Graph Theory:* Introduction, Basic terminologies; Euler relation; Graph representation; Isomorphism; path and circuits – Euler and Hamilton path and circuits; Dijkstra's shortest path algorithm; scheduling problems; Travelling sales man problem; Planar graph – idea of region, Euler formula, Kuratowski theorem and application; Tree – basic terminology, traversal, Prefix code, Idea of data compression – Huffman code; Spanning tree, Minimum spanning tree – Prim's and Kruskal method.

### Readings

- Ralph Grimaldi, *Discrete and Combinatorial Mathematics*, International Edition, 2003.
- Bernard Kolman, *Discrete Mathematical Structures*, Robert Busby, Sharon Ross, International Edition, 2008.
- K. H. Rosen, *Discrete Mathematics and Its Applications*, McGraw-Hill, 2008.

## III.2 English Language Proficiency Course (Intermediate Level)

The **English Language Proficiency Course (ELPC)** aims to enable students to improve their ability to speak, read, listen and write in English.

**General Objectives:** The course will give students practice in using English in a wide variety of contexts relevant to work, study and social activities. It will specifically help students to

- Understand and respond to spoken language
- Learn how to speak fluently and use appropriate expressions
- Read and comprehend different kinds of texts for different purposes
- Write coherently and effectively in formal and informal contexts.

The Intermediate Course is for those who are fairly confident of using the skills of listening, speaking, writing and reading for different purposes at a relatively high level. Students' level of proficiency will be ascertained through a placement test administered at the beginning of the course so that they can be placed at an appropriate level.

**Specific Objectives:** At the **Intermediate Level**, the candidate will have adequate competence in the English language to be able to read, write, listen and speak in familiar contexts relevant to work, study and social activities.

More specifically the candidate will be able to:

- Understand and respond to spoken language (instructions, directions, requests for information, dialogues, etc.) and take notes on structured speeches, short lectures on familiar topics.
- Speak about themselves, people, events, incidents and express feelings and opinions.
- Read texts of different types (articles, reports, narratives, etc.) and understand / infer ideas /meanings from the context.
- Write clear, coherent texts (short articles, reports, descriptions, formal and informal letters, etc.) on familiar topics describing experiences, expressing opinions and giving convincing reasons to support the argument.

### Materials

This course will be task-based. There will be no prescribed textbook for the course but a loose-leaf booklet from which texts and tasks will be drawn. Activities will include comprehension questions, reference and vocabulary questions, discussion questions, note-making and writing exercises, and activities for discussion and interaction through role-play, pair and group work. All the exercises/activities will be provided as handouts/worksheets which can be neatly filed.

This course is characterized by the following specific features: (i) it is student centred in that the teacher provides opportunities for learners to read, write, speak and listen by teaching them different strategies, instead of explaining things in simpler English or in L1, gives over the task/activity to students so they can gradually become autonomous learners; (ii) the task carried out by the students individually, in pairs or groups will be monitored continuously and feedback given for them to improve. Thus ongoing evaluation is an integral part of this course; (iii) while the face-to-face contact is 80 hours, it will be mandatory for students to put in a minimum of 30 hours in practising these skills in their own time; these home-tasks will also form a part of their internal assessment; without this kind of learner investment, a language proficiency course is not likely to achieve the desired objectives. Further, in writing and oral presentations, good organization and coherence (and communication of meaning) are emphasized as opposed to producing grammatically correct sentences alone.

### **Course Evaluation**

The evaluation pattern will be the same as for other courses in the University. However, since there is equal emphasis on oral skills and on reading and writing, the final exam will provide for the assessment of these as well. The pattern suggested is the following:

***Internal Assessment:*** The work done will be equally divided among the four skills in the form of home assignments, class-participation, quizzes, group work and presentations. A minimum number of each of these will be decided. Many of these activities can be carried out during tutorials with the teacher-student ratio in the range 1: 5/6.

***Final exam:*** There will be no ‘seen or rehearsed’ texts/questions that students can reproduce from memory in their examination. The questions in tests/exams will require students to demonstrate their ability to read, write, listen and speak in new situations.

Final tests will be held on two days to test the following skill areas: ***Reading, Listening,***

***Writing:*** Day 1    ***Speaking:*** Day 2

## **English Language Proficiency Course (Advanced Level)**

The **English Language Proficiency Course (ELPC)** aims to enable students to improve their ability to speak, read, listen and write in English.

**General Objectives:** The course will give students practice in using English in a wide variety of contexts relevant to work, study and social activities. It will specifically help students to

- Understand and respond to spoken language
- Learn how to speak fluently and use appropriate expressions
- Read and comprehend different kinds of texts for different purposes
- Write coherently and effectively in formal and informal contexts.

The Advanced Course is for those who are quite confident of using the language for a variety of purposes in a variety of contexts. Students' level of proficiency will be ascertained through a placement test administered at the beginning of the course so that they can be placed at an appropriate level.

At the **Advanced Level**, the candidate will have the ability to read and critically respond to varied types of materials in English in written and oral form. More specifically the candidate will be able to

- Understand and respond to spoken language (instructions, short lectures, requests for information, dialogues, etc.) and take notes on structured and unstructured speeches/talks, identify main/sub points, recognize trends in discussions, identify the intended meaning through the tone of speech, distinguish between what is explicit and implicit;
- Speak about themselves and a variety of topics/events, texts and people; express feelings and opinions, engage in sustained monologues and dialogues for at least two minutes, respond to questions /comments justifying an opposing point of view, take a position and argue in support of that view.
- Read texts of different types (narrative, descriptive, expository, argumentative) in articles, reports, etc. and understand / infer ideas /meanings from the context, understand and evaluate different points of view, transfer information from one type to another;
- Write clear, coherent texts (short articles, reports, descriptions, formal and informal letters, reviews, summaries etc.) on familiar topics describing experiences, expressing opinions and giving convincing reasons to support the argument in academic writing;

## **Materials**

This course will be task-based. There will be no prescribed textbook for the course but a loose-leaf booklet from which texts and tasks will be drawn. Activities will include comprehension questions, reference and vocabulary questions, discussion questions, note-making and writing

exercises, and activities for discussion and interaction through role-play, pair and group work. All the exercises/activities will be provided as handouts/worksheets which can be neatly filed.

This course is characterized by the following specific features: (i) it is student centred in that the teacher provides opportunities for learners to read, write, speak and listen by teaching them different strategies, instead of explaining things in simpler English or in L1, gives over the task/activity to students so they can gradually become autonomous learners; (ii) the task carried out by the students individually, in pairs or groups will be monitored continuously and feedback given for them to improve. Thus ongoing evaluation is an integral part of this course; (iii) while the face-to-face contact is 80 hours, it will be mandatory for students to put in a minimum of 30 hours in practising these skills in their own time; these home-tasks will also form a part of their internal assessment; without this kind of learner investment, a language proficiency course is not likely to achieve the desired objectives. Further, in writing and oral presentations, good organization and coherence (and communication of meaning) are emphasized as opposed to producing grammatically correct sentences alone.

### **Course Evaluation**

The evaluation pattern will be the same as for other courses in the University. However, since there is equal emphasis on oral skills and on reading and writing, the final exam will provide for the assessment of these as well. The pattern suggested is the following:

***Internal Assessment:*** The work done will be equally divided among the four skills in the form of home assignments, class-participation, quizzes, group work and presentations. A minimum number of each of these will be decided. Many of these activities can be carried out during tutorials with the teacher-student ratio in the range 1: 5/6.

***Final exam:*** There will be no 'seen or rehearsed' texts/questions that students can reproduce from memory in their examination. The questions in tests/exams will require students to demonstrate their ability to read, write, listen and speak in new situations.

Final tests will be held on two days to test the following skill areas:

***Reading, Listening, Writing:*** Day 1

***Speaking:*** Day 2

### III.3 Creativity in the Digital World: Graphics and Multimedia

Computer graphics and multimedia is an emerging area in the modern world. This paper aims at exploring the world of creativity through graphics and multimedia. It begins from understanding the basic concepts and goes on to describe the techniques based on multimedia along with the audio visual representation of data.

**Topics to be covered but not restricted to:**

#### **Graphics:**

Geometry: Points, Lines, Planes, Pixels and frame buffers, different types of display devices, DDA and Brasenham's

Algorithms: Line algorithm, Algorithms for generating circles, ellipses and characters.

Aliasing and Antialiasing. Graphics system architecture, Rasterization algorithms, 2D and 3D Transformations,

Modelling of 3D surfaces: Viewing transformation, rendering algorithms, mapping of texture, fractals, colour system, particle system.

Introduction to Solid Modeling: Introduction to DUI, Current GUI Tools, Windows, X Windows, Motifs etc.

#### **Multimedia**

Information, Computer, Communication convergence and Entertainment products, Multimedia systems Architecture. Coding and Compression. Virtual reality technology, Video Conferencing, Multimedia Broadcast Services, Content based retrieval for text And images, Indexing and retrieval of Video Database, Distributed Multimedia systems, Multimedia man machine interface, Applications of advanced image synthesis: visualization, animation, games, CAD systems, simulation. Introduction of GPU and its architecture. Concepts of OpenGL and its application in multimedia based systems.

#### **Readings**

- Angel, *Interactive Computer Graphics: A Top-down Approach using OpenGL*, E.ISBN: 9780321549433, Addison-Wesley, 5th, 2008
- Eric Haines and Naty Hoffman, *Real-time Rendering (3rd edition)*, Tomas Akenine-Moller, AK Peters Publisher, 2008
- David F Rogers, *Procedural Elements for Computer Graphics*, McGraw-Hill, 1997• **James D. Foley, Andries van Dam, Steven K. Feiner and John F. Hughes, *Computer s Graphics Principles and Practice*, Addison Wesley Professional, 1995**

## IV.1 Modeling Continuous Change through Ordinary Differential Equations (ODE) and Complex Analysis

Modeling is the process through which real life problems are converted to the mathematical language. This paper aims to develop techniques required to study the models involving differential equations. The methodology will be to first analyze and understand the problem, then write down the governing equations, solve them and then analyze the solution. The problems will be picked up from engineering, ecology, medicine, etc.

### Topics and Applications:

Differential equations, solution by series expansion, analytic functions, contour integrals, Laurent series and residues.

1. Application of first order differential equation to draining a tank, harvesting of renewable natural resource, indoor temperature oscillation, flight trajectory, survivability with aids.
2. System of linear differential equations applied to mechanical systems, electrical network, drug assimilation into the blood, solution of a linear system (in non-degenerate cases) using eigen pairs.
3. Modeling two-axle automobile, earthquake induced vibrations of a multistory building, evaluation and application of matrix exponential (in non-degenerate cases)
4. Planar autonomous linear systems with graphical representation (in non-degenerate cases)
5. Planar non-linear system applied to ecological models, wildlife conservation preserve, mechanical systems, epidemic models, determination of stability and classification of equilibrium of a planar nonlinear system by linearization.
6. Poincare-Bendixson Theorem and its applications.
7. Power series solution about a regular point of an analytic ordinary differential equation
8. Power series solution of Bessel's equation of order 0
9. Brief introduction to analytic functions of a complex variable: This includes power-series expansions, Laurent expansions and Liouville's theorem.
10. Ability to use residue calculus to perform definite integrals and compute them using MatLab.

### Readings

- T. M. Apostol *Calculus*, Volume 2, Wiley Eastern, 1980.
- W. E. Boyce and R. DiPrima, *Elementary differential equations*, John Wiley, 2005.
- C.H. Edwards and D.E. Penny, *Differential equations and boundary value problems: Computing and modeling*, Pearson education (Singapore), Pte. Ltd., 2005.
- E. Kreyszig, *Advanced engineering mathematics*, John Wiley, 1999.

### Internet Resources:

1. <http://www.sosmath.com/diffeq/diffeq.html>
2. [http://serc.carleton.edu/sencer/ode\\_real\\_world/index.html](http://serc.carleton.edu/sencer/ode_real_world/index.html)
3. [http://www.diptem.unige.it/patrone/differential\\_equations\\_intro.pdf](http://www.diptem.unige.it/patrone/differential_equations_intro.pdf)

## **IV.4 Understanding Economic Behaviour : The Macro Level**

The basics of macroeconomics, macroeconomic issues, the role of government in the macroeconomy, the components of the macroeconomy, the methodology of macroeconomics.

### **National Income Accounting: Introduction**

Definitions of terms and an understanding of GDP will be followed by methods of calculating GDP. Also personal income, real and nominal GDP, issues of black economy, limitations of GDP based calculations will be discussed with examples.

### **Classical Systems**

Models of full employment, terms such as macroeconomic equilibrium, issues of marketing, capital production, commodity and related topics will be discussed in an interactive format.

### **Modern economies**

How modern economies work in a competitive market. Demand and supply of money. Credit systems, Liquidity. Effects of inflation. Fisher effect.

### **Keynesian Model**

Classical concepts and their re-orientation in current economies will be taken up in detail. This includes, government economic models, fiscal policy, expenditure and income models, the multiplier effect.

### **Open Economy and Macroeconomics**

Balance of Payments, equilibrium output, foreign exchange, market rates. Factors that effect change in economies.

### **Readings**

K. E. Case and R. C. Fair, *Principles of Economics*, Pearson Education Asia Low Price Edition, 2002.

N. G. Mankiw, *Principles of Economics*, Thomson, 2002.

J.E. Stiglitz and C.E. Walsh, *Principles of Economics*, , W.W. Norton & Company, New York, 2002.

R. Stone and G. Stone, *National Income and Expenditure*, Bowes and Bowes London, 1962.

**LIST of COURSES**  
**AVAILABLE FROM JAMIA MILLIA ISLAMIA**  
**For**  
**Paper No. I.3, I.4, IV.2 &IV.3**

1. English for Media Communication
2. Advertising
3. Contemporary India and the World We Live in
4. Development Journalism
5. Media Management
6. Public Relations and Corporate Communication
7. Media Laws and Ethics
8. Mass Communication Theory
9. Media Research

**Note:**

Each of the above courses from Jamia is of 3 credits (3 hrs a week)

The decision to offer two or three specific courses from amongst the above mentioned courses varies from semester to semester.

# **English for Media Communication: Writing for the Media**

## **Introduction:**

Media communication entertains, educates, and provokes public debates. It is being practiced across different media outlets like newspapers, radio, and television. And in more recent times, the development in digital technology has led to a massive growth of on-line communication. This course introduces the student to a wide range of skills and disciplines associated with the use of English in mass communication.

## **Objectives:**

- To enable students to improve their ability to compose mass communication texts, particularly with regard to grammar, vocabulary, spelling, punctuation, etc.
- to expose them to different types of mass communication texts with a view to analyzing rhetorical organization and stylistic features of mass communication discourse
- to enable them to try their hand at authoring and editing various types of mass communication texts

## **Course Description:**

### **Unit 1**

- Accuracy Development: Using real-life mass communication situations, students will work on aspects of grammatical accuracy, lexical accuracy, and speech accuracy ( in developing speech accuracy the focus will be on correct English pronunciation: RP, the 'Received Pronunciation' – the BBC accent/ Standard Indian Pronunciation)

### **Unit 2**

- Discourse Appreciation: To enable students to make a distinction between mass communication and interpersonal communication discourse, students will work with examples of such mass communication texts as editorials, features, articles, interviews, etc. with a view to analyzing their rhetorical organization and stylistic features (teaching materials to be culled from real-life mass communication texts)

### **Unit 3**

- Reading Skills: Students will read selected passages drawn from real-life mass communication texts to monitor comprehension, to recognize methods of persuasion, to summarize, to draw conclusions, to make inferences, to analyze points of view, to identify main ideas, etc.

#### **Unit 4**

- **Writing Skills:** Students will be introduced to the notions of 'process' and 'product' in writing; they will then focus on learning skills of 'process writing' such as brainstorming for ideas, organizing ideas, writing the first draft, improving through drafts, and finalizing the copy etc.

#### **Unit 5**

- **Authoring and Editing Mass Communication Texts:** students will be required to write mass communication texts by using different input- sources like interviews (either face to face or by telephone); public addresses; press conferences; press releases; written documents, etc.; they will then be asked to edit these news texts for producing the final copy (teaching materials will be culled from real-life mass communication texts)

#### **Suggested Readings:**

1. Bell, Allen. *The Language of News Media*. Oxford: Blackwell.
2. Gration, G., J. Reilly and J. Titford. *Communication and Media Studies*. Basingstoke: Macmillan Education.
3. Mascull, B. *Key words in the media*. London: Collins Cobuild.
4. Brown, Gillian. *Listening to Spoken English*. London: Longman.
5. Hildyard, Jim. *Spelling Matters*. Oxford: Heinemann Educational Publishers.
6. Smee, Mark. *Grammar Matters*. Oxford: Heinemann Educational Publishers.
7. Corbett, Pie. Rachel Roberts. *Grammar Success 4*. Oxford: Heinemann Educational Publishers.
8. MacNab, Lindsay, Imelda Pilgrim, and Marian Slee. *Skills in English 3R*. Oxford: Heinemann Educational Publishers.

# Advertising

## Introduction:

The potential of advertising was realized during the World War I when all sides used advertisements to mobilize people for the war. In the early twentieth century advertising moved out of the arena of print industry and quickly took advantage of the new mass media, using cinema and radio, to transmit commercial messages. The 1950s not only brought postwar affluence to the average citizen in the West but whole new glut of material goods for which, need had to be created. In America it quickly became the hottest consumer property. Till date, Advertising remains one of the strongest communication strategies. It has gained so much importance and influence that the 'commercial break' has now become an integral part of every television programme.

## Objectives:

- To introduce the students to the creative, technical, ethical and managerial aspects of advertising and advertising industry.

## Course Description

### Unit 1

- Advertising as a communication technique: Evolution and Growth of Advertising, Scope of its messages. Advertising effectiveness.
- Different types of Advertising and Different mediums of Advertising.
- Advertising Agencies and the Hierarchy Structure, the Idea Pitching Techniques.
- In house and Out House Advertisement Productions, Advertising Campaigns.

### Unit 2

- The Marketing Process and Advertising technique: The Communication Process and Objectives, The Dynamics of Marketing Communications and its Media.
- The Five Ps of marketing, Mega Marketing, Marketing Mix and The Competitive Triangle. Direct Marketing and Precision Marketing.

### **Unit 3**

- The Product Life Cycle, Marketing Mix and Integrated Marketing Communications. Internal Marketing and retaining Customers.
- Laws and Ethics in Advertising, Social responsibility, Apex Bodies in Advertising and their code---ASCI, AAI.
- Case Studies ---Analyzing the Ethical Aspects.

### **Unit 4**

- The Promotion Mix: Promotion as an investment, The Promotion Mix decision, the push and pull Strategy.
- DAGMAR and the Conviction Model, AIDA Sequence, Promotion and Demand curve relation, The Media Weight Theory.
- Consumer Behavior---External and Internal factors.
- The Process of Advertising Creation—Situational Analysis, marketing plan and Advertising Plan, Advertising Feedback.

### **Unit 5**

- The Brand: Concept and Management, Components of Brand: Strategy and Structure, Positioning, Image and personality.
- The Advertising Appeal: Language, sound, Graphics and Visuals.
- Campaign Planning and writing Briefs, Scripting for Ads.
- Case Study and Analysis of Various Advertisements and Brands.
- Market and advertising research: Types of Marketing Research, Pre Test, Post Test, Positioning research, and Psychographic Analysis

### **Suggested Readings:**

1. Internet Advertising (Theory and Research) by David W. Schumann.
2. Law of Advertising, Broadcasting, Journalism and Public Relations by Michael G. Parkinson.
3. Radio Advertising: The Authoritative Handbook by NTC Business Books.
4. Practical Radio Promotions by Ted E.F. Roberts.
5. High Performance Selling by Ken Greenwood.
6. Selling Radio Direct by Michael C. Keith.
7. Positioning: The Battle for Your Mind by Al Ries.
8. The 22 Immutable Laws of Branding by Al Ries.

9. The 22 Immutable Laws of Marketing by Al Ries.
10. Marketing Warfare by Jack Trout and Al Ries.
11. The fall of Advertising and the Rise of PR by Laura Ries.
12. The Future of Advertising: New Media, New Clients, New Consumers in the Post Television Age by Joe Cappo.
13. The End of Advertising as We Know It by Sergio Zyman.
14. Life After 30 Second Spot: Energize Your Brand With a Bold Mix of Alternatives to Traditional Advertising by Joseph Jaffe.
15. Buzz Marketing: Get People to Talk About Your Stuff by Mark Hughes.
16. Connected Marketing: TV Viral, Buzz and Word of Mouth Revolution by Justin Kirby.
17. Online Marketing by Ravi Damani.
18. Web Copy that Sells: The Revolutionary Formula for Creating Killer Copy Every Time by M Veloso.
19. The New Marketing Manifesto: The 12 Rules for Building Successful Brands in the 21st Century by John Grant.
20. After Image: Mind Altering Marketing.
21. Truth, Lies, and Advertising: The Art of Account Planning by Jon Steel.
22. Behind the Scene in Advertising, Mark III: More Bull More.
23. Creative Advertising: Ideas and Techniques from the World's Best Campaigns by Mario Pricken.
24. Advertising Management: Batra, Aaker and Myers
25. Advertising and Promotion: Belch and Belch
26. The [Un]Common Sense of Advertising: Sanjay Tiwari
27. It Happened in India: Kishore Biyani
28. Consumer Behaviour and Marketing Strategies: Hawkins and Cooney.
29. Marketing Management, Philip Kotler, Kevin Lane Keller

# **Contemporary India and the World We Live In (Enrichment Paper)**

## **Introduction:**

Today the media is mainly obsessed with the news about politics and conflicts around the world. The reason is simple the majority of readers, listeners and viewers buy newspapers or turn to radio or television to know how the politicians running the affairs of the state? Or who is spilling whose blood for what? Unfortunately not only in India but elsewhere in the world too political, foreign and strategic affairs reporters are still considered to be more important than reporters working on other beats. Thus for every reporter, copy writer and editor it is essential to have the basic knowledge of those national and international issues which frequently debated and discussed in media.

## **Objectives:**

- To introduce the students to the politics of Cold War period.
- To introduce the students to the politics of Post Cold War era.
- To introduce the students to the major national, regional and international conflicts.
- To introduce the students to the major national/regional and international organizations and bodies.
- To introduce the students to the foreign and economic policy of India.

## **Course Description:**

### **Part-I**

#### **Contemporary International Scene:**

##### **Unit 1**

- Unipolar World V/S Multi-polar World.
- East-West Conflict and the NATO Drive Towards Eastern Europe.
- Rise of Russia as Economic-Military Power.
- Major Conflicts: Arab-Israeli Conflict, Afghanistan, Iraq, Iran, Lebanon and North Korea.

##### **Unit 2**

- Militant Islam: Ideology, concept of Jihad and growing terrorism.
- North-South Divide: Aspirations of the developed as well developing nations.
- Conflict of civilization

### **Unit 3**

- International Organizations: UN and its organs.
- International Financial Institutions: World Bank, International Monetary Fund (IMF) and World Trade Organization (WTO).
- Regional cooperation; SAARC, ASEAN, EU, GCC and others.

## **Part-II**

### **India's Foreign Policy:**

#### **Unit 1**

- Conceptualization of Foreign Policy: Continuity and change, ambitions to emerge as a major power.
- India's conception of the UN in the context of its foreign policy objectives and its role in international politics.

#### **Unit 2**

- India's Economic diplomacy.
- India's Oil Security.
- Indo-Pak Conflict: Cross border Terrorism and the problem of Kashmir.
- Indo-US Nuclear Deal.

**Note: Most of the topics mentioned above will be covered through classroom lectures but efforts will also be made to organize one-day seminars on selected topics.**

### **Suggested Readings:**

1. Discovery of India by Jawaharlal Nehru.
2. Wonder That Was India by A.L. Basham.
3. The Partition Omnibus With an Introduction by Mushirul Hasan (Oxford India Paperbacks)
4. India Wins Freedom by Maulana Abul Kalam Azad.
5. Introduction to the Constitution of India by Durga Das Basu.
6. India's Foreign Policy and its Neighbors by J.N. Dikshit.
7. India and Regional Developments: Through the Prism of Indo-Pak Relations by J.N. Dikshit.

# Development Journalism

## Introduction

The development journalism module will open a completely different world for students as they discover some exciting possibilities of researching lesser known areas that are neglected by a lazy media. It will familiarize them with the realities of a changing India, developing India and how it is punctuated with anachronisms.

## **Objectives:**

- Developing the Skills to analyze and report the socio economic developmental issues.
- Nourishing the communication skills required for Societal Empowerment.

## Course Description:

### **Unit 1**

- The reality of India
- Understanding Development Journalism: How it is dramatically changing in a changing India.
- How it has numerous new areas under it now as the umbrella of what is development grows.
- Challenges before a development journalist.

### **Unit 2**

- Making Development Writing interesting and contemporary.
- How to get your publication interested in a development agenda.
- Tapping sources.
- Building a specialization
- Reporting on Environment, Health, Issues before Society
- Understanding the complex mosaic of India
- Updating yourself all the time.
- Understanding rural realities

### **Unit 3**

- Children's issues
- Burning social issues like feticide, dowry, domestic violence, aging, problems of economic growth, etc.
- Gender issues
- Using all possible resources for research and learning
- How constant learning is the key to understanding complex issues in India.
- Understanding sociology and history to get a perspective.
- Staying positive to beat cynicism that envelops development reporters and writers.

#### **Unit 4**

- How to develop a mindset to do serious work of this nature all through life.
- Finding out unusual ideas
- Handling print, online and documentaries on development subjects.
- How to keep development writing serious and readable.
- Using modern writing techniques to beat boredom.
- Development of the idea and final execution
- Using statistics, graphs and pictures.
- Why it is important to bring in investigation and interpretation

#### **Unit 5**

Practical writing and reporting exercises on development subjects

#### **Suggested readings:**

1. Development Journalism: An Introduction by Dinesh C.Sharma.
2. Development Journalism, what next an agenda for the Press by D V R Murthy.
3. News With Third World perspective by Philip C.Horton
4. Social change by Steve Vago
5. World Development: Report-knowledge for Development . 1999: The World Bank

# Media Management

## **Introduction:**

Gone are the days when managing a newspaper or magazine, radio or a television station, was simple. Not very long ago editors were not only had the responsibility of bringing out a newspaper/magazine, or making editorial decisions in a radio or television channel but they were also responsible of administering the news organization in which they worked. Now the editors have a rival in the form of ‘media managers’ who are not only responsible for the financial and administrative management of a media organization but also have a say in the editorial matters because editorial decisions have always a bearing on the circulation of a newspaper or the ratings of a television news channel.

## **Objectives:**

To teach the students how to manage different news platforms from newspapers to web portals.

## **Course Description:**

### **Unit 1**

- Introduction to the course
- Media Management
- Principles of Media Management
- Media as an Industry and a Profession
- Preparing yourself for the Management
- Motivation and the work force
- Qualities of Leadership and Management
- Ownership Patterns of Mass Media
- Operations and Structure of News Media Company
- Organization Theory: Delegation, Decentralization, Motivation, Control and
- Coordination
- Hierarchy: Function and Organizational Structure of Different Departments.

### **Unit 2**

- Business of Media: Discuss the way in which revenues and profits are achieved. Media regulation and possible “effects” of media on individuals and society
- Current Media Scenario including news portals
- Future Media Trends
- Policy Formulation: Planning and Control, Problems, Processes and Prospects of
- Launching Media Ventures
- General Management: Finance, Circulation, Sales Promotion (Including Pricing
- And Price War Aspect)
- Advertising and Marketing
- Apex Bodies: DAVP, INS and ABC

### **Unit 3**

- Economics of Print and Electronic Media: Management, Business and
- Financial aspects of Media Management
- Media Budgeting and Finance Management, Budget Control
- Sales Management, Marketing and Market Analysis

### **Unit 4**

- Advertising and Sales and Marketing Strategy
- Competition and Survival, Evolving a Strategy
- Media Planning and Buying
- TAM, INTAM, TRP, GRP and other media jargons
- PR for Building and Sustaining Business and Audience
- Integrated Marketing Communications: ATL and BTL
- Global Marketing Strategy
- Marketing and Research
- Market Survey Techniques

### **Unit 5**

- Employee/Employer and Customer Relations Services: Marketing Strategies, Brand
- Promotion (Space/Time, Circulation), Reach, Promotion, ,
- Human Resource Development for Media
- Foreign Equity in Indian Electronic and Print Media and Press Commissions on
- Indian Newspaper Management Structure.

### **Suggested Readings:**

1. Media Management by Jan LeBlanc Wicks and Others.
2. Organizational Behavior by Linda K. Stroh and Others.
3. Human Resource Management by John Bratton and Jeffery Gold.
4. Electronic Media Management by Peter B. Orlik.
5. Staffing Organization by Robert E. Ploy Hart and Others.
6. The Practice of Management by Peter F. Drucker.
7. Radio-Television-Cable Management by James A. Brown, Ward L. Quaal.
8. Putting Total Quality Management to Work by Marshal Sashkin, Kenneth J. Kiser.
9. Daytime Television Programming by Marilyn J. Matelski.
10. Basic Radio Programming by Michael J. Langevin.
11. Motivation and Personality by Abraham Harold Maslow.

12. Creative Management by William Marsteller.
13. Selling Radio Direct by Michael C. Keith.
14. Financial Management by Coker Group, De Marco Associates.
15. Managing Organizations: Functions and Behaviors by Daniel F. Jennings and others.
16. Public Television for Sale: Media, the Market and the Public Sphere by William Hoynes.
17. Future Radio Programming: Cultivating Listenership in Digital Age.
18. Radio Programming: Tactics and Strategy by Eric Norberg.
19. Radio Operations: Management and Employee Perspectives by Lewis B. O'Donnell and Others.
20. Managing in a Time of Great Change by Peter F. Drucker.
21. Ratings Analysis: Theory and Practice by James G. Webster and Others.
22. Systems Theory Applied to Television Station Management by Jr. William G. Convington.
23. Managing Media Convergence: Pathways to Journalistic Cooperation by Kenneth C. Killebrew.
24. Managing in the Media by William Houseley and Others.
25. Making Sense of Change Management: A Complete Guide to Models, Tools, and Techniques of Organizational Change by Esther Cameron.
26. The Change Management Toolkit by C A Carnall.
27. Leading Change by John P. Kotter.
28. Selection Interviews: Process Perspectives by Robert Dipboye.

# **Public Relations and Corporate Communication**

## **Introduction:**

Though PR and Corporate Communication are not new for the West, in India they have acquired immense importance as an area of specialization with the liberalization and globalization of economy. Not only the multinationals but the Indian corporates too employ PR officers and CCs for effective management of media and staff.

## **Objectives:**

- To prepare the students to be able to work as PR persons and Corporate Communicators.

## **Course Description:**

### **Unit 1**

- Understanding the Brand and Brand Equity
- Brand Identity and Reputation - A brief look at some of the legendary Brands (Private/Public) and comprehending brand personality (Case Studies).

### **Unit 2**

- Evolution and History of Public Relations: Definition of PR, PR and Allied Disciplines (Publicity, Propaganda, Public Affairs and Lobbying etc.)
- Symmetrical and Asymmetrical Theories of PR.
- Law and Ethics of PR (Defamation, Copyright, Invasion of Privacy: PRSI Code of Ethics)

### **Unit 3**

- Interface of PR with Various Management Disciplines: Human Resource Development, Finance and Marketing etc.
- PR Tools: Interpersonal, Mass Media and Selective Media.

#### **Unit 4**

- PR in Industry: Public Sector, Private Sector, and Multinationals.
- PR in State and Central Governments and Functioning of Various Media Units of the State and Union Governments.

#### **Unit 5**

- Strategic PR/CC and Management: Defining Strategy and its Relevance in Public Relations and Corporate Communication, Campaign Planning, Management and Execution.
- Optimizing technology in communication design and campaign planning.
- Role of PR/CC in Crisis Communication and Disaster Management

#### **Unit 6**

- Building a Distinct Corporate Identity: Concepts, Variables and Process, Making of House Style (Logo, Lettering and Process)
- Corporate Social Responsibility and the new paradigm in Corporate Communication
- Media Relations: Organizing Press Conferences, Facility Visits, Press Briefs.
- Proactive and Reactive Media Relations.

#### **Suggested Readings:**

1. Strategic Public Relations Management: Planning and Managing Effective Communication Programme by Erica Weintraub Austin.
2. Law for Advertising, Broadcasting, Journalism and Public Relations by Michael G. Parkinson.
3. Mediamorphosis: Understanding New Media by Roger F. Fidler.
4. The fall of Advertising and the Rise of PR by Laura Ries.
5. PR Power: Inside Secrets from the World of Spin by Amanda Berry.
6. Public Relations Handbook by Theaker.
7. Public Relations: A Practical Guide to Corporate Communications Management by Sandra Oliver.
8. Running a Public Relations Department by Mike Beard.
9. Effective Internal Communication by Lyn Smith.
10. Communicating Change: Winning Employee Support for New Business Goals by T J Larkin.

## **Media Laws and Ethics**

### **Introduction:**

Good reporting is not the only skill necessary to make a news organization reputable. To gain the trust of viewers, listeners or readers serious consideration must also be given to ethical situations that may arise during the course of reporting. In addition to that, the prevalent media laws must be well understood by every reporter editor and must be followed at all times.

### **Objectives:**

- To understand the duties and the rights of a reporter or editor.
- To understand the tricky dilemmas involved in news reporting.
- To understand various national and international laws that governs the Press.

### **Course Description:**

#### **Unit 1**

- Introduction to Indian Judicial System and Terminology
- Brief History of Press Laws in India: Before and After Independence.
- Freedom of Expression and Speech under the Constitution of India.
- Laws Governing the Reporting of Court Proceedings and Contempt of Court.
- Laws Governing the Proceedings of Parliament and State Assemblies and Privileges.

#### **Unit 2**

- Official Secrets Act and Right to Information.
- Laws Concerning Airwaves.
- Laws against Defamation and Libel
- Press Council of India.

#### **Unit 3**

- Theoretical Approaches to Ethics (The Golden Mean, the Categorical Imperative, the Principle of Utility, the Veil of Ignorance, Judeo-Christian Ethics).
- Media Ethics: Ethical Decision Making (Ethics and Media Practitioners, Relationship Between Ethics Political and Social Issues, Economic Issues in Relation to Ethics)

#### **Unit 4**

- Fundamental Ethical Standards (Accuracy, Objectivity, Fairness and Balance, Fakery, Truth, Integrity of Sources), Conflict of Interest, Codes of Ethics, Moral Reasoning Processes for Ethical Decisions.
- Ethical Situations and Dilemmas (Business v/s Profession, Freebies and Junkets, Anonymous Attribution, Checkbook Journalism, Right of Privacy v/s Public Interest)

## **Unit 5**

- Sensationalism, Decency and Good Taste (Direct Quotations, Correction of Errors, Fiction and Fact, Impact of Current Trends on Ethics (Economic Demands on Media, Globalization and War on Terror).

### **Suggested Readings:**

1. Press Laws by D.D. Basu (Prentice Hall)
2. Press Laws by Subir Ghosh.
3. Journalistic Ethics by P.K. Bandhopadhyay and Kuldeep S. Arora.
4. Media Ethics: Cases and Moral Reasoning by Clifford G. Christians and Others. Published by Pearson Education.
5. Journalism Ethics by Phillip Seib & Kathy Fitzpatrick.
6. Ethics, Copyright & the Bottom Line by Eastman Kodak.
7. Mass Communication Law and Ethics by Roy L. More.

# Mass Communication Theory

## Introduction:

Any course in media and journalism requires the development of critical understanding of media and its function. Without a proper ground for understanding media, the media practitioners remain incomplete and insensible. The necessity of good journalists who understand the subtle shades of communication, the effect of processing and dissemination of information at larger scale and the responsibility of mass communication is growing day by day. A journalist who is aware of his/her society, who understands the power of communication and the change that it can make and most of all the impact of his/her work is built only with a proper ground in mass communication theory. The paper helps to make a responsible and good journalist by inspiring the power of thought and critical perception development.

## Objectives:

- To develop basic ground of media literacy and critical perspective of analyzing and understanding media
- To understand the role, function, process, elements, importance and the characteristics of communication in society
- To understand the development of process and semiotics schools through critical analysis of various communication model
- To understand the growth and evolution of communication theories in relation to the changing society and development of thought
- To introduce to various schools of thought, prominent concepts, ideas and philosophies
- To develop multi-disciplinary approach of higher studies
- To understand the international communication process and development
- To understand the importance, application and growth of communication in development
- To realize the role of journalist in responsible and effective communication

## Course Description:

### Unit 1: Basics of Mass Communication

- Communication & Perspectives of Understanding: Bias, Objectivity, Stereotyping, Genre, Narrative, Feminist Critique, Media's role in power and politics, Media literacy
- Introduction to communication: Definitions, Elements and Process of communication, Barriers to Communication, Types of Communication

## **Unit 2: Communication Models & Theories**

- Communication models: Rhetoric, SMCR, Shannon & Weaver, Newcomb, Gerbner, Westley-McLean, Berlo, Schramm, Shoemaker
- Mass communication theories: History of media theory, Mass society theory, Magic bullet theory, Propaganda – Behaviorism & Freudianism, Limited effects theory, Two step flow, Agenda setting, Uses & Gratification, Functionalism, Semiotic, Symbolic interaction, Catharsis, Social learning, Social cognition, Cultivation, Critical & cultural theories, Marxist theory, Neo-Marxist theory, Political economy, Hegemony, Spiral of Silence, Public Sphere, Innis & McLuhan, Post-modernism, Post-structuralism

## **Unit 3: Development Communication**

- Development Communication & Development: What is development? Theories of social change, Theories of development
- Development Communication & International Communication: What is development communication? Dominant paradigm of development communication, Information flow theory, International communication – NWICO and beyond, Normative theories, Passing of dominant paradigm, Alternative approach of development communication – alternative media
- Development Communication & Journalism: Development support communication, DSC projects in India & abroad, Planning DSC projects, Journalists & Development communication

## **Suggested Readings:**

1. Mass Communication Theory: An Introduction by Denis Mcquail.
2. Theories of Communication: A Short Introduction by a Mattelart.
3. Understanding Media by Marshall McLuhan.
4. Understanding Media Theory by Kevin Williams (Arnold 2003)
5. Mass Communication Theories and Research by Alixis Tann.
6. Communication Studies: An Introductory Reader, Edited by J Corner Hawthorn.
7. The Process and Effects of Mass Communication by Wilbur Schramm and F. Roberts (Illinois 1971)
8. Key Concepts in Television Studies by Bernadette Casey, Neil Casey, Ben Calvert, Liam French and Justice Lewis (Routledge)
9. Communication and Social Change by P.C. Joshi.
10. Designing Messages for Development by Bella Modi (Sage Publications 1991)
11. The Myth of Information Revolution: Social and Ethical Implications of
12. Communication Technology Edited by Michael Trabant.
13. The Impact of Television Advertising on Children by Namita Unnikrishnan and Shailja Bajpai (Sage Publications)
14. Key Concepts in Journalism Studies by B Franklin and others (Sage)
15. Transnational Television, Cultural Identity and Change: When STAR Came to India by M Butcher (Sage)
16. Mass Communication Theory: Foundations, Ferment, And Future by Stanely J. Baran and Dennis K. Davis
17. Globalization, Development and the Mass Media by Collin Sparks
18. Development as Freedom - Amartya Kumar Sen; Oxford University Press
19. Manufacturing Consent - Edward S. Herman & Noam Chomsky; Pantheon Books
20. Culture, Inc.: The Corporate Takeover of Public Expression - Herbert I. Schiller; Oxford University Press
21. Convergence Culture: where old and new media collide - Henry Jenkins; NYU Press



# Media Research

## Introduction:

Any masters' course requires the student to develop higher academic aptitude through research paper. Media research not only provides a critical outlook for analyzing media in society, but it helps in developing scientific, logical and objective thought process. The rational approach develops a problem solving attitude and management tendency. The growing research sectors in media require all the media practitioners to know and understand the various research tools and methods. The knowledge of media research helps all journalists and media practitioners to develop their performance further.

## Objectives:

- To develop logical and rational thinking and scientific understanding
- To develop critical thinking process and objective approach of solving problem
- To develop research aptitude and academic approach
- To build logical problem solving attitude in relation to particular issue
- To develop wider perspective in identifying and developing research problem
- To understand research areas in media
- To expose to various research tools, methods, concepts and school of thoughts
- To expose to various up-to-date academic research works

## Course Description:

### Unit 1: Phase I

- **Introduction to Social Science Research:** Development of mass media research, Media research ethics, identifying a research topic, Writing a hypothesis or research questions, being aware of the limitations of a study
- **Quantitative & Qualitative Research:** What is Quantitative Research, What is Qualitative Research, Review of Literature, Citation and Bibliography

### Unit 2: Phase II

- **Conceptualization and Measurement:** Variables, Concepts and measurement, Levels of measurement, Units of analysis, Validity and reliability
- **Sampling:** Why sample? Types of sampling, Sampling distribution, Sampling Error
- **Causation and Research Design:** Kinds of explanation, establishing causation, Types of Research Design, Experimental, Quasi-experimental, Longitudinal, Cross-sectional

### **Unit 3: Phase III**

- **Data collection:** What is Data, Primary & secondary data, Data collection tools – Questionnaire, Schedule, Diary, People’s meter, Phone, media source, books
- **Quantitative Methods:** Surveys, Content Analysis
- **Qualitative Methods:** Ethnography, Unstructured/Semi-structured interviewing, Participant Observation, Focus Groups, Textual Analysis

### **Unit 4: Phase IV**

- **Data Analysis Techniques (non-statistical):** Grounded theory method, Finding patterns, Constant comparative method, concept mapping, Semiotics, Conversation analysis, Memoing, Coding, Drawing conclusion, Introducing NVivo
- **Data analysis techniques (statistical):** Coding & Tabulation, Univariate, bivariate, multivariate analysis, Frequency distribution, Measures of Central Tendency, Measures of Dispersion – Range, variance, Standard deviation, Introducing SPSS

**Total Marks: 100 (Written Exam:50, Final Product: 30, Internal Assment:20)**

### **Suggested Readings:**

1. Mass Media Research: An Introduction by Roger D. Wimmer and Joseph R. Dominick
2. The Practice of Social Research by Earl Babbie
3. Qualitative Media Analysis (Qualitative Research Methods) - David L. Altheide; Sage University Press
4. Qualitative Communication Research Methods - Thomas L. Lindlof, Brian C. Taylor; Sage Publications
5. Strategies for Interpreting Qualitative Data - Martha S. Feldman; Sage University Paper
6. Journalism & Mass Communication Quarterly - Association for Education in Journalism & Mass Communication

## **Innovation Projects**

Projects will be given vital importance.

Mentors shall play key role in group project work. Mentors will be carefully selected for their expertise in the relevant areas. They may be from both within the partner institutions and outside.

### **Mentorship**

Project work/ Practicum will be closely supervised by one teacher and one Mentor who may be from outside the host institution.

### **Evaluation**

- For projects, testing methodology will include group testing.
- Transfer of grades/credits between Jamia Millia Islamia and University of Delhi.

## **ADMINISTRATION**

**Cluster Innovation Centre**  
**Rugby Sevens Building, University Stadium**  
**G. C. Narang Road, University of Delhi**  
**Delhi-110007**  
<http://cic.du.ac.in>