THE TAMIL NADU Dr. M.G.R. MEDICAL UNIVERSITY, CHENNAI.

REGULATIONS AND SYLLABUS FOR THE

ACADEMIC YEAR 2011-2012.

DIPLOMA IN PODIATRY

1. CURRICULUM AND SYLLABUS OF THE COURSE

I YEAR

PAPER I- English

PAPER II - Basic and Clinical Aspects of Podiatry

PAPER III - Practical - Podiatry

PAPER IV - Practical - Computer Skills

II YEAR

PAPER V - Prevention, Surgical therapy and Rehabilitation

PAPER VI - Practical -Podiatry

FIRST YEAR SYLLABUS

1	BASIC AND CLINICAL ASPECTS OF PODIATRY	NO.OF HOURS
	1.1 Introduction: What is Podiatry? , Branches of Podiatry, Role of podiatrists- Screening, Management strategies-(Foot injury, Footwear, Ulceration, High grade clinical care), Education, Wound management & mini debridement, Patient intervention – (Guidelines on risk, Annual risk assessment, Wound care, Routine care ,Treating calluses and corns, Padding to distribute pressure, Trimming toe nails), Foot (size, style, region, construction), Suturing (common less of unilateral edema, bilateral edema, Professional advice on – (Prevention of foot problems, Proper care of foot, All ages, See with risk of amputation /DM /Arthritis), Why in Diabetics?	100

	1.2 General Diabetology: What is Diabetes?, Definition, GTT Fasting, Post prandial sugars, HBA1C, Why is it important in India?, Status of diabetic patients, Bare foot walking, Neuropathy, The different types of diabetes - Type 1, Type 2, FCPD, Causes and Risk factors of diabetes: Hereditary, Life style, Age, BMI & stress, Complications and treatment of diabetes: Neuropathy, Retinopathy, Nephropathy, Infections, Peripheral vascular disease, Coronary artery disease, Management of Diabetes: Diet & Exercise, Treatment: Oral hypoglycemic agents, Insulin (GLP1 analogues, DPP4 inhibitors	150
	1.3 Definition of: Diabetic foot, Diabetic foot syndrome, Natural history, Neuropathy (Callus, plantar neuropathy ulcer, infection, diabetic gangrene, PVD (Peripheral Vascular Disease), concurrent dental illness **Primary risk factors:** Neuropathy, Ischemic, Ischemic Neuropathy **Secondary Risk Factors**: Late diagnosis, Risk of PVD (Peripheral vascular disease), Depression.	100
	1.4. Structure / anatomy: Shapes of foot. Skin/ Nails, Arches,Bones, Joints, Muscles, Vascular, Neurological Callus : Present in review application of Ischemic callus, callus around ulcers **Functional Anatomy / Bio Mechanics :** Standing, Stability, Walking, Midstane, Gait cycle, Gravity **Callus:** Present in, Removal of callus, Application, Ischemic callus, Callus around ulcers	300
	1.5 Bacteriology : Pathogenesis infection of diabetic foot , Major pathogenesis causing foot infections, Colonisation, Infection, sepsis, Inflammatory response syndrome, Sepsis shock syndrome, ARDS (Acute respiratory disease syndrome), MOF(Multiple organ failure), Organism (Gram Positive – Cocci, Gram Negative – Bacilli, Anaerobic, Fungal, Mixed)	90
	1.6. **Clinical Pharmacology:** Drug administration, Drugs on CVS (Central vascular system), Drugs on CNS (Central nervous system), Drugs on Respiratory, Drugs on Gastrology, Drugs on Endocrine, Drugson Rhuematic diseases, Route of administration, Excretion, Metabolism, Duration of drugs, Dosage of drugs	110

	1.7. Practical Session: History taking, Do's and don'ts of diabetic foot & Foot care, Identifying dressing material, Identifying foot deformities- Corn, Callus, Dressing procedure, Foot examination complete foot exam including jerks, Monofilament test, Foot pressure study, Identifying instruments used in foot department, Identifying foot medications, Sterilization & autoclaving of instruments, Handling sterilized materials	
2	**ENGLISH** Standard English, Pronunciation of English words, common errors in pronunciation, fluency in English, socio-cultural linguistic competence, note taking in lecture class.	10
	COMMUNICATION:- Role of communication, Defining Communication, Classification of communication, Purpose of communication, Major difficulties in communication, Barriers to communication, Characteristics of successful communication – The seven Cs Communication at the work place, Human needs and communication "Mind mapping", Information communication, listening skills	10
	COMPREHENSION PASSAGE:- Reading purposefully, Understanding what is read, Drawing conclusion, Finding and analysis **EXPLAINING:-** How to explain clearly, Defining and giving reasons, Explaining differences, Explaining procedures, Giving directions	10 10
WRITING BUSINESS LETTERS:- How to construct correctly, Formal language, Address, Salutation, Body, Conclusion. **REPORT WRITING:-** Reporting an accident, Reporting what happened at a session, Reporting what happened at a meeting		10

3.	**MEDICAL RECORDS:** Introduction to medical records; history; need for medical record; content of medical records; special records; formats, forms. Design & control; filing methods, storage & retention; indexes & registers; legal aspects of medical records; quality assurance; recent advantages in medical record system, EMR	20
4	**NUTRITION: Essential nutrients**	
	Importance of nutrition in health and sickness- Essential nutrients functions, sources and requirements- Classification of foods and their nutritive value- normal requirements at different ages. Balanced diet for different age group	
	Nutritional Problems	30
	Nutritional deficiencies – Deficiencies, correction, treatment and referral – protein Energy/ malnutrition – vitamin and mineral deficiencies; Nutritional anaemia in women- under five nutrition – Supplementary food - Special diets of individuals for different age group.	
5	**BASICS OF COMPUTER**	
	COURSE CONTENT: Introduction to computer- I/O devices, Different kinds of ROM – kilobytes. MB, GB	
	Typing text in MS word, Manipulating text, Formatting the text, using different font sizes, bold, italics, Bullets and numbering, Pictures, file insertion, Aligning the text and justify, choosing paper size, adjusting margins, Header and footer, inserting page No's in a document, Printing	10
	Creating table in MS-Excel, Cell editing, Using formulas and functions, Manipulating data with excel, Using sort function to sort numbers and alphabets, Drawing graphs and charts using data in excel, Auto formatting, Inserting data from other worksheets.	10

	Preparing new slides using MS-POWERPOINT, Inserting slides, slide transition and animation, Using templates, Different text and font sizes, slides with sounds, Inserting clip arts, pictures, tables and graphs, Presentation using wizards, Basics of E- Mails, Entries in software with special emphasis of earned software.	10
	PRACTICAL Typing a text and aligning the text with different formats using MS-Word 2. Inserting a table with proper alignment and using MS-Word Create mail merge document using MS-word to prepare greetings for 10 friends Preparing a slide show with transition, animation and sound effect using MS-Powerpoint Customizing the slide show and inserting pictures and tables in the slides using MS-powerpoint 6. Creating a worksheet using MS-Excel with data and sue of functions 7. Using MS-Excel prepare a worksheet with text, date time and data 8. Preparing a chart and pie diagrams using MS-Excel Using Internet for searching, uploading files, downloading files creating e-mail ID 10. Access programs using functions	50

SECOND YEAR SYLLABUS

	PREVENTION, SURGICAL THERAPY AND REHABILITATION	
6	**DIABETIC FOOT MANAGEMENT** **6.1 Medical Management:** Foot infection including cellulites, Erysipelas Necrotising, Fascitis, Osteomyelitis, Major classes of antibiotics, Grading system for foot disease, Wagner, Kings college London **2 Surgical therapy:** rgical therapies for diabetic foot , Minor procedure, Wound dressing & management, Signs and symptoms of gangrene foot, Amputation in diabetic of food Mechanical pressure relief devices and mechanical therapy, Wound healing, Major surgical procedures, Post operative care wound Prosthesis for amputees.	110

	6.3 Prevention of Ulcer: Crutches, Invalid walker, total contact cast, Felt and foam dressing, Plantar metatarsal pads, Insoles, Outsoles, Prevention of diabetic foot **6.4 Foot wears:** Parts of the diabetic foot wear, classification of foot wear, Customized foot wear materials used in diabetic footwear – MCR, MCP, Medical management of diabetic foot and diabetic therapy **6.5 Rehabilitation:** Rehabilitation and psychological aspects, counselling of patients before and after amputation, Patient education	130
	6.6 Pathogenesis of wound healing Wound healing stages : Delay healing management, Split graft	150
	6.7 Instrumentation / maintenance **Podiatry kit** : Scalpel 11/15, Blades, Padding/strapping, Orthotics infection control, Insoles, Nippers /files /pumice stone, Skin sponge/nail file, Scissors/forceps, Gel foot care kit	120
	6.8 Maintenance of instrument: Sterilization and infection control, Sterilization of instruments, Autoclaving, Classification of instruments based on sterilization techniques	100
	PRACTICAL SESSIONS X-Ray, Doppler, Bio-thesiometry, Wound Dressing, Chiropody, Corn removal, Nail trimming, Total contact casting, Assisting Surgeons in wound management, Maintaining equipments, Foot Wear, Materials used, Counseling patients, Post-Operative care	

7	**7.1 PRINCIPLES OF MANAGEMENT** **7.1.1. PRINCIPLES OF MANAGEMENT** Development of Management: Definitions of Management – Contributions of F.W. Taylor, Henry Fayol and others **7.1.2 FUNCTIONS OF MANAGEMENT:** Planning, Organizing, Directing, Controlling ***Planning****:* Types of planning – Short–term and long plans – Corporate or Strategic Planning – Planning premises – Polices – Characteristics and sources – principles of policy making – Strategies as different from policies – Procedures and methods – Limitations of planning ***Organizing*****:** Importance of organization – Hierarchy – Scalar chain – Organization relationship – Line relationship – Staff relationship - Line staff relationship – Functional relationship - Committee organization – Management committees – Departmentation *Motivation:* Motivation theories – McGregor's theory X and theory Y – Maslow's and Herzberg's theory – Porter and Lawler model of complex view of motivation – Other theories – Diagnostic signs of motivational problems – Motivational techniques **Communication:** Types of communication – Barriers of effective communication – Techniques for improved communication ***Directing****:* Principles relating to Direction process – Principles andtheories of leadership – Leadership Styles – Delegation of authority ***Controlling****:* Span of control – Factors limiting effective span of control – Supper management, General managers, Middles managers and supervisors – Planning and controlling relationships – Management control process – Corrective measures – Strategic control points – Budgetary control – Types of budgets **Co-ordination**: Co-ordination and co-operation – Principles of co-ordination – Techniques of co-ordination charts and records – Standard procedure instructions	30

	7.2 PERSONNEL MANAGEMENT Objective of Personnel Management, Role of Personnel Manager in an Organization, Staffing and work distribution techniques, Job analysis and Description, Recruitment and selection processes, Orientation and training, Coaching and counseling, disciplining, Complaints and grievances, Termination of employees, Performance appraisal, Health and safety of employees - Consumer Protection Act as applicable to health care services	10
	7.3 FINANCIAL MANAGEMENT Definition of financial Management, Profit maximization, Return maximization, wealth maximization, Short term Financing, Intermediate Financing, Long term Financing, leasing as a source of Finance, cash and Security Management, Inventory Management, Dividend policies, Valuations of Shares, Financial Management in a hospital, Third party payments on behalf of patients. Insurance, health schemes and policies	10
	ENVIRONMENTAL SANITATION healthy living: basis sanitary needs - Air, sunlight and ventilation - Home environment smoke, animals, water, drains and toilets etc **8.1 Safe water** Sources of water & characteristics of safe water-sources of contamination and Prevention - Purification of water for drinking: methods small and large scale - Disinfections of well, tube well tank and pond in a village - Waterborne diseases and prevention.	30
9	**BIO- MEDICAL WASTE MANAGEMENT** Methods of excreta disposal; Methods of waste disposal - Hazards due to waste. Drainage and preparation of soak pits - Maintaining healthy environment within and around village cleaning and maintenance of village drains, ponds and wells - Common waste, excreta and animal waste-disposal in the village.	30

SCHEME OF EXAMINATION

I YEAR

Sl.No.	Name of the paper	Internal Assessment		Theory		Practical	
		Max.	Min.	Max.	Min.	Max.	Min.
1.	Basic and Clinical Aspects of	50	25	100	50	50	25

Internal Paper:

Paper	Name of the paper	Internal Assessment		Theory	
		Max.	Min.	Max.	Min.
2.	English	50	25	100	50
3.	Computer Skills	50	25	100	50

*English and Computer are internal papers. Marks to be sent to the University. There will be no University Examination for English and Computer Paper.

*The respective Colleges will conduct Examination for introduction to Computers and English and the marks will be sent to the University.

Internal Assessment

Theory (20)	Practical (20)	Log Book / Project / Record (10)

- Wherever there is no Log Book /Project / Record work the 10 marks be added to the Practical of the respective subject.

II YEAR

Sl.No.	Name of the paper	Internal Assessment		Theory		Practical	
		Max.	Min.	Max.	Min.	Max.	Min.
I	Prevention, Surgical therapy and Rehabilitation	50	25	100	50	50	25

MERIT STATUS

Qualifying marks for pass shall be 50% in theory/ practical and internals

1. Candidates getting more than 75% in first attempt will be given 'distinction' in the subject
2. Candidates getting 60% aggregate marks in first appearance will be awarded 'first' class
3. Candidates getting below 60% will be declared passed in the "second class"
4. If the candidate takes more than one attempt to clear all papers. He/she shall be awarded 'pass' class.
5. Re-evaluation of answer paper is not permitted. Only re-totaling of theory answer paper is allowed, in the failed subjects.

RESOURCE MATERIAL/ METHODOLOGY FOR TEACHING:

Lectures, Slides using Over Head Projector (OHP) & LCD, Posters, Visual Aids, Pamphlets, Board, Models, Workshops, Seminars, Group activities, Documentation, Questionnaires as Tools, Demonstration of Equipments

RECOMMENDED LIST OF TEXT & REFERENCE BOOKS FOR DIABETIC PODIATRY COURSE

1. M M S Ahuja et al, *RSSDI text book of Diabetes Mellitus,* 2 :1, RSSDI (2002)

2. Pickup John and Williams Gareth, Textbook of Diabetes, 2:3, Black well publishing, (2003)

3. Kahn C Ronald, *Joslin's Diabetes Mellitus,* 14th edition, Lippincott Williams & Wilkins, (2005)

4. Alberti and P. Zimmet, *International textbook of Diabetes Mellitus,* 2: 2 John Wiley & Sons (1997)

5. Roith and Taylor, *Diabetes Mellitus Fundamental and Clinical,* 2nd edition, Lippincott Williams & Wilkins (2000)

6. Levin Marvin E, Foster Alethea VM and Edmonds M, *Diabetic Foot: A Clinical Atlas,* Jaypee, (2003)

7. Kozak George P et al, *Management of Diabetic Foot Problems*, W B Saunders Company, (1984)

8. Jeffcoate William and Macfarlance Rosamund, *The Diabetic Foot,* Chapman & Hall Medical, (1995)

9. Bal Arun et al, *Proceedings of the 2nd Indo US Workshop on Diabetic Foot Com,* IJCP, (2005)

10. Bal Arun et.al, *Handbook of Diabetic Foot Care,* 1st *edition,* DFSI, (2005)

11. Veves Aristidis, Giurini John M and Logerfo Fra, *The Diabetic Foot Medical and Surgical Management,* Humans Press, (2003)

12. Katsilambros N et al, *Atlas of The Diabetic Foot,* Wiley, (2003)

13. Boulton Andrew J M, Connor Henry & Cavanagh, *The foot in Diabetes,* John Wiley & Sons, (1994)

14. Frykberg Robert G, *The High Risk Foot in Diabetes Mellitus,* Churchill Livingstone, (1991)

15. Ramani Ananthakrishna, Kundaje G N and Nayak M, *Hemorheologic Approach in the Treatment of Diabetic Foot Ulc,* Treantal 400, (1990)

16. The Diabetic Foot, *European Association for the Study of Diabetes,* European Association for the Study of Diabetes, (1991)

17. Edmonds Michael, *Diabetes in Pictures: The Diabetic Foot,* HOECHST, (1990)

18. Grunfeld Carl, Holewski John J and Moss Kathry, *Diabetic Foot Ulcers: Prevalence And Prevention,* UPJOHN, (1990)

19. Ramakrishnan Pinjala and Rao P V, *Hand Book of Diabetic Foot for Limb Salvage,* Pinjala, (1997)

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