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**Dr. M.B. ASWATH NARAYANAN, B.Sc., MDS.,
REGISTRAR**

Ref:No.AC IV (4)/4569/2021

Dated: 02.09.2021

To

The Principal of all affiliated AHS - UG Degree Colleges

Sir/Madam,

Sub:	Academic - The Tamil Nadu Dr.M.G.R. Medical University, Chennai - Resolution of Standing Academic Board in AHS-UG Degree Courses held on 29.04.2021 - Communication – Reg.
Ref: 1	Minutes of the Board of Studies Meeting held on 12.04.2021 for AHS-UG Degree Courses.
2	Minutes of the 60 th SAB meeting held on 29.04.2021.
3	Resolution No.60 passed by the Governing Council in its 282 nd meeting held on 19.07.2021.

I am to inform you that the minutes of the meeting of the Board of Studies in AHS-UG Degree Courses held on 12.04.2021 was recommended by the Standing Academic Board, at the 60th meeting held on 29.04.2021. The following recommendations of the Standing Academic Board was approved by the Governing Council at the 282nd meeting held on 19.07.2021. The Standing Academic Board has resolved that:

POINT NO.1

Resolved that both in service and non-service candidates should undergo one year Internship training in B.Sc.,Radiography and Imaging Technology (RIT) and B.Sc., Radiotherapy Technology (RTT) courses, as one year Internship is mandatory as per AERB norms.

The above Resolution substituted as follows:-

Resolved that both in service and non-service candidates should undergo one year Internship training in B.Sc.,Radiography and Imaging Technology (RIT) and B.Sc., Radiotherapy Technology (RTT) courses, as Internship is mandatory for a candidate to have hands on Practical training to work in Imaging and Therapy facilities, established and run as per AERB norms.

POINT NO.2

* To constitute an Expert Committee to specify Minimum Qualifications for Teachers to teach B.Sc., Radiography and Imaging Technology and M.Sc., Radiography and Imaging Technology students.

* To forward the outcome of the Expert Committee Meeting to The Government of Tamil Nadu for their consideration, as these courses are conducted by Government Medical colleges.

POINT NO.3

To ratify the action taken by the University in including General Nursing and Midwifery (GNM) and BSc Nursing courses as Eligibility criteria in the existing Regulation for Certificate Course in Community Health Care from the academic year 2020-2021 onwards.

POINT NO.4

To approve the minutes of the Expert Committee constituted on 7th April 2021 with regard to regulations for transfer/migration of students from one recognized institution to another recognized institution under Allied Health Science Courses. Further, resolved to follow the respective council norms wherever applicable with regard to transfer of student from one institution to another and to implement for the candidates applying from the Academic Year 2021-2022 onwards.

Minutes of the Expert Committee meeting:

The Expert Members reviewed the Guidelines for transfer of candidates from one recognized Institution to another recognized Institution of this University and suggested as follows :

1. To delete point no.V "Migration/Transfer shall be effected only at the beginning of the concerned year of study" in existing Guidelines for Migration/Transfer of from one recognized Institution to another recognized Institution.
2. The term days and attendance will be considered for the candidate from the beginning of the academic year irrespective of the institution.
3. The course completion certificate should be issued by the transferee college based on the attendance records issued by the primary institution.
4. Only one transfer will be considered for a student during the entire course of study including internship.

POINT NO.5

To approve the recommendations of the Expert with regard to Pathology & Microbiology syllabus content in B.Sc., Cardiac Technology and resolved to include the following topics in pathology contents:

Stress Myocarditis, COVID Myocarditis, Viral Myocarditis and Viral Induced clotting.

To approve the opinion given by the Expert Member with regard to inclusion of Pathology syllabus in B.Sc Physician Assistant Course.

This will be implemented for the candidates admitted from Academic Year 2020-2021 onwards.

I.B.Sc CARDIAC TECHNOLOGY

PATHOLOGY SYLLABUS

GENERAL PATHOLOGY

1. **INTRODUCTION**, CONCEPT OF DISEASE, CELL INJURY CAUSES, CELLULAR RESPONSES TO STRESS & NOTORIOUS STIMULI, CELLULAR ADAPTATION OF GROWTH & DIFFERENTIATION – ATROPHY, HYPERTROPHY, HYPERPLASIA AND METAPLASIA.
2. **CELL INJURY - REVERSIBLE INJURY** - TYPES, MORPHOLOGY, INTRACELLULAR ACCUMULATIONS, FATTY CHANGE, CELLULAR AGEING
3. **CELL INJURY - IRREVERSIBLE INJURY** - TYPES, MORPHOLOGY, NECROSIS, APOPTOSIS, DYSTROPHIC AND METASTATIC CALCIFICATION
4. GENERAL FEATURES OF **INFLAMMATION**, HISTORY, STIMULI FOR ACUTE INFLAMMATION, VASCULAR & CELLULAR EVENTS, CHEMICAL MEDIATORS.
5. **CHRONIC INFLAMMATION**- CAUSES, FEATURES AND EXAMPLES
6. **WOUND HEALING**, REGENERATION, REPAIR & FRACTURE HEALING
7. **EDEMA** - TYPES WITH EXAMPLES, HYPEREMIA, CHRONIC VENOUS CONGESTION & HEMORRHAGE
8. **THROMBOSIS** - ETIOPATHOGENESIS, MORPHOLOGY AND FATE OF THROMBUS

9. **EMBOLISM** - ETIOPATHOGENESIS AND MORPHOLOGY
10. **GANGRENE AND SHOCK**
11. **VITAMIN DEFICIENCIES** AND ASSOCIATED
CARDIOVASCULAR DISORDERS.

SYSTEMIC PATHOLOGY

I. THE BLOOD VESSELS AND LYMPHATICS

- **HYPERTENSION**- ETIOPATHOGENESIS, CLINICAL FEATURES, MORPHOLOGY AND COMPLICATIONS
- **ATHEROSCLEROSIS** - ETIOPATHOGENESIS, MORPHOLOGY, COMPLICATIONS, GENETIC FACTORS AND CLINICAL IMPLICATIONS
- **VASCULITIS** - INFECTIOUS ARTERITIS, NON-INFECTIOUS ARTERITIS - TYPES, CLINICAL FEATURES AND MORPHOLOGY.
- **ANEURYSMS**- TYPES, ETIOPATHOGENESIS, CLINICAL FEATURES AND MORPHOLOGY

II. HEART

- **HEART FAILURE** - ETIOLOGY, TYPES OF HEART FAILURE, COMPENSATORY MECHANISMS
- **CONGENITAL HEART DISEASE** MALPOSITIONS OF THE HEART, SHUNTS (CYANOTIC CONGENITAL HEART DISEASE), OBSTRUCTIONS (OBSTRUCTIVE CONGENITAL HEART DISEASE)
- **ISCHAEMIC HEART DISEASE**, ETIOPATHOGENESIS, LABDIAGNOSIS, EFFECTS OF MYOCARDIAL ISCHAEMIA, GROSS AND MICROSCOPIC FEATURES.
- **RHEUMATIC FEVER AND RHEUMATIC HEART DISEASE** - ETIOPATHOGENESIS AND MORPHOLOGY
- **ENDOCARDITIS**, ATYPICAL VERRUCOUS (LIBMAN-SACKS) ENDOCARDITIS, NON-BACTERIAL THROMBOTIC (CACHECTIC, MARANTIC) ENDOCARDITIS, INFECTIVE (BACTERIAL) ENDOCARDITIS - TYPES, ETIOLOGY AND MORPHOLOGY
- **VALVULAR DISEASES AND DEFORMITIES** - ETIOPATHOGENESIS, TYPES, CLINICAL FEATURES AND MORPHOLOGY

- **CARDIOMYOPATHY** - CARDIAC HYPERTROPHY AND DILATATION - ETIOPATHOGENESIS, TYPES AND MORPHOLOGY.
- **MYOCARDIAL DISEASES** - MYOCARDITIS, CARDIOMYOPATHY - ETIOPATHOGENESIS, TYPES AND MORPHOLOGY
- **PERICARDIAL DISEASES**, PERICARDIAL FLUID ACCUMULATIONS, PERICARDITIS - TYPES AND MORPHOLOGY
- **TUMOURS OF THE HEART** - TYPES, GROSS AND MICROSCOPIC FEATURES.
- STRESS MYOCARDITIS, COVID MYOCARDITIS, VIRAL MYOCARDITIS AND VIRAL INDUCED CLOTTING.

MICROBIOLOGY SYLLABUS

I General Microbiology:

Introduction and History of Microbiology Sterilisation and Dis-infection General and specific Methods related to instruments and catheters used in Cardiac related conditions

Staining : Grams and Acid Fast

Basics in Culture Media and Identification of Bacteria
Antibiotic Sensitivity Testing and its Clinical Application
Hospital Infection Control Practices
Bio Medical Waste Management

II Immunology

Basics of Cells and Organs of Immune System

Types of Immunity--- Innate, Humoral and Cell mediated
Antigen, Antibody and Antigen - Antibody reaction
Serological and Immunological tests
Hypersensitivity Reactions --- Anaphylaxis
Immunodeficiency and Autoimmunity Transplantation
Immunity and HLA Typing Immuno-haematology
Vaccines and Universal Immunisation

III Diseases of the Blood and Cardio Vascular System

- : Diseases transmitted by blood and blood products
Mechanism of transmission and its Prevention
- : Rheumatic fever --- Aetiology, pathogenesis,
Laboratory diagnosis and Prevention
- : Infective Endocarditis: Aetiology, pathogenesis,
Laboratory diagnosis and Prevention
- : Hepatitis B and C virus - Structure, Pathogenesis,
lab diagnosis and prevention
- : HIV --- Structure, Pathogenesis, Lab diagnosis
and Prevention
- : Sepsis—Aetiology, Pathogenesis, Lab diagnosis
and Prevention
- : Device Associated Infections --- Aetiological agents,
Mechanism of transmission, Bio films and Prevention

IV: Practicals:

- : Spotters demonstration for identification and
two points for identification.
- : Grams Staining --- Procedure, observation
and Reporting
- : Acid Fast Staining --- Procedure, observation and Reporting
- : Problem Solving Exercise --- Simple case studies
related To Blood and Cardio vascular conditions in
which Cardiac technologist has a role to perform.

II B.Sc., (PHYSICIAN ASSISTANT) COURSE

Expert opinion on B.Sc., (PHYSICIAN ASSISTANT) COURSE :

- Review of syllabus of B.Sc., (Physician Assistant) course
sent by University by email was thoroughly done
- The need for inclusion of pathology was focused on review
- There are units of syllabus which include
haematology, pathogenesis and applied pathology
- There are units of syllabus which covers clinical skill
based curriculum including principles of pathology

Thus it is reflected that **there is No Need for further inclusion of content of pathology** for B.Sc.,(Physician Assistant) course syllabus

Any other Item:

- The Standing Academic Board has resolved to constitute an expert committee to specify the Minimum Qualifications for Teachers to teach various Undergraduate courses in Allied Health Science courses.

Further, I am also request that the decision of the Standing Academic Board as mentioned above be to all the Professors and Head of the Departments of your institution for informaion and a copy of this letter be displayed on the Notice Board of the College / Hostel for the information of the students.

The receipt of this letter be acknowledged immediately.

Sd/-
REGISTRAR.