

CLINICAL  
NETWORK  
INTERNATIONAL

# STUDENT GUIDE

CLINICAL SYLLABUS

2017/18





## **COURSE INTRODUCTION**

Welcome to David Game College's Medical & Life Sciences Programme. We are pleased to present this year-long study programme delivered by expert award-winning clinicians. The course has been designed for students aspiring to pursue medical and life sciences careers including medicine, dentistry, pharmacy, biomedical sciences and other related pathways.

## **HOW WILL THIS COURSE HELP YOU?**

University admissions are fiercely competitive. Successful candidates need to have an outstanding academic record as well as demonstrate exceptional commitment when applying for courses such as medicine, dentistry, pharmacy and scientific related disciplines.

This course has been designed to boost your examination grades, deepen your knowledge of various clinical specialities, re-enforce A-Level knowledge and evidences your interest in pursuing medical and scientific careers. You will be taught how to exercise your knowledge which will prove vastly beneficial at interviews and higher study. Clinical facets of these topics will be taught to improve your knowledge of human health and scientific advancements. You will gain an insight into cutting edge knowledge and research and interact with academic papers which will place you at an advantageous position when applying for university.

The clinical content in this medical sciences course is delivered by expert award-winning clinicians. It is intended for individuals interested in science related careers and is thus, beneficial for a wide spectrum of

students. For individuals wishing to study medicine, dentistry, pharmacy and related disciplines, this course will prove particularly useful in aiding UCAS applications to top tier universities, as well as improve your chances of securing your preferred place of study for your chosen career.

## **WHY CHOOSE DAVID GAME COLLEGE?**

Established in 1974, David Game College (DGC) is an independent college that aims to promote the joy of knowledge and learning while simultaneously maintaining the sharpest possible focus on the demands of public examinations. The college teaches students at GCSE and A level. In May 2017, David Game College was graded as 'Outstanding' in all five categories by Ofsted. Our students recommend David Game College because of the quality of our teaching and the College enjoys a global reputation. Small class sizes and individual attention, combined with 43 years of experience enable us to help students gain the qualifications needed to maximise their higher education and career prospects.



# COURSE TOPICS

## CARDIOLOGY: 25/11/2017

Cardiovascular sciences is a major component of your A-Level syllabus. Cardiovascular disease is a major cause of morbidity and mortality and a source of huge scientific interest and research. In this session, you will be taught:

- Anatomy of the heart
- The cardiac cycle
- The electrocardiogram (ECG)
- Arrhythmias
- Ischaemic heart disease
- Atherosclerosis
- Valvular disease
- Key cutting-edge research papers in the field of cardiology

## RESPIRATORY: 16/12/2017

Respiratory physiology is frequently examined in A-level examinations and is an important clinical topic as more and more people are affected by respiratory conditions in the UK. In this session, you will be taught:

- Respiratory anatomy and physiology
- Lung function tests including tidal volumes, vital capacity
- Asthma
- COPD
- Cystic fibrosis
- Pulmonary emboli

## NEUROLOGY: 13/01/2018

Neuroscience is a fascinating branch of medicine with complex scientific enigmas yet to be solved. In this session, you will be taught:

- Brain anatomy
- Spinal anatomy
- Action potential
- Parkinson's disease
- Stroke
- Cranial nerves

## ENDOCRINOLOGY: 13/01/2018

A wide range of endocrinopathies affect patients in many ways. Hormones regulate a multitude of bodily functions and so have systemic effects on the body. In this session, you will be taught:

- Endocrine axes
- Hormones
- Thyroid conditions
- Diabetes
- SIADH
- Sodium regulation

## GASTROENTEROLOGY: 10/02/2018

Gastroenterology is a major component of biology examinations. It is important to have a strong grasp of this body system. In this session, you will be taught:

- The gastrointestinal tract anatomy
- GI physiology
- Oesophageal disorders
- Stomach disorders
- Intestinal disorders
- Liver pathology & alcohol-related liver disease

## INFECTION & ANTIBIOTICS: 10/02/2018

Immunology is a remarkably fascinating field of medicine. The innate and acquired immune systems are commonly examined in exams and frequently tested in academic interviews. In this session, you will be taught:

- Immune system physiology
- T cells & B cells
- Inflammation
- Antibiotics & antibiotic resistance
- Bacterial structure
- Tuberculosis
- Multidrug-resistant tuberculosis

## GENETICS: 17/03/2018

Our understanding of genetics has rapidly expanded in the last couple of decades. It is a heavily tested component in exams and topical in interview questions. In this session, you will be taught:

- The genetic code
- Mitosis
- Meiosis
- Genetic inheritance
- Genetic conditions
- Advances in human genetics
- Mutations
- Cancer
- Stem cells

## RADIOLOGY & MEDICAL PHYSICS: 17/03/2018

Clinical decisions are increasingly dependent on radiological guidance and interventions. In this session, you will be taught:

- Chest x-rays
- Abdominal x-rays
- CT scans
- MRI
- Medical physics
- Nuclear scans

## THE NATIONAL HEALTH SERVICE: 07/04/2018

The National Health Service (NHS) is considered one of the most remarkable healthcare systems in the world. Aspiring clinicians should have an understanding of this healthcare infrastructure and available career opportunities. Candidates should be aware of the complex challenges facing the NHS including an ageing population, antibiotic resistance and fiscal issues.

Recognising the intensively competitive nature of medical school applications; this course will provide insight into maximising your chances of securing a place at your desired medical school.

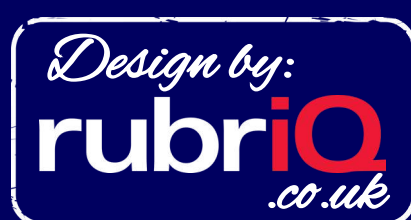
## MEDICAL ETHICS & LAW: 07/04/2018

Clinicians require a sound understanding of medical ethics and law. This is an evolving branch of medicine aiming to address complicated ethical dilemmas which are increasingly encountered in the workplace. This session will clarify the meaning and significance of key ethical concepts including:

- Medical ethics
- Autonomy
- Beneficence
- Non-maleficence
- Allocation of resources
- Medical law

**FEES** for 2017 have been set at a special introductory rate of £450.00 and are payable in full to David Game College. Please visit [davidgamecollege.com/195/medical-programme](http://davidgamecollege.com/195/medical-programme) for details of how to pay.

**REGISTER** for the programme by visiting the college website (URL opposite). Please note, seats are limited so early booking is strongly advised to ensure your place is confirmed.



[www.davidgamecollege.com](http://www.davidgamecollege.com)