1495 UNIVERSITY OF ABERDEEN

SR1503- Fitness, Performance and Survival

Course Handbook 2023-2024

School of Medicine, Medical Sciences & Nutrition

Undergraduate Medical Sciences

Contents

Course Summary

This course will explore the concept of physiological performance, fitness and survival in different contexts. It will discuss what performance is and how it can be measured. The physiological and metabolic adaptations responsible for changes in performance will be examined under different environmental conditions as well as the influences of health, gender and age. Basics of human conditioning will be covered, with an emphasis on the physiological differences between basic conditioning principles. The different conditioning techniques will be related to training outcomes and their physiological backgrounds.

Course Aims & Learning Outcomes

- To provide a basic understanding of performance and how it can be measured
- To provide a detailed introduction to sport and exercise physiology
- To provide an understanding of fundamental types of conditioning, and their physiological backgrounds
- To provide the knowledge about conditioning principles that give the basics for an advanced understanding of specific and specialised training and conditioning procedures to improve performance and fitness

Course Teaching Staff

Course Co-ordinator(s):

Dr Michael Scholz (ext.8022); m.e.scholz@abdn.ac.uk

Other Staff:

School Staff

- Dr Alison Jenkinson (AMJ), Medical Sciences
- Dr Arimantas Lionikas (AL), Medical Science
- Dr Michael Scholz (MES), Medical Sciences (Course Co-ordinator)
- Dr Derek Scott (DAS), Medical Sciences
- Daniel Sutton (DS), Medical Sciences

Other Staff – University Sport & Exercise Team (S&E)

- Gillian Kerr (GK)
- Christine Roberts (CR)

Assessments & Examinations

Students are expected to access and study **ALL** lectures, practical classes and online test materials, and to complete all exercises by the given deadlines. The minimum performance acceptable for the granting of a class certificate is evidence of engagement with, at least, 50% of the lectures and practical classes and assessments. Failure to do so may result in your class certificate being withheld. The course assessment consists of 100% continuous assessment. There is no written examination in December. The resit examination comprises the resit of failed assessment component. The overall performance of the student will be expressed as a grade awarded on the attached Common Grading Scale (CGS).

Class Representatives

We value students' opinions in regard to enhancing the quality of teaching and its delivery; therefore, in conjunction with the Students' Association we support the Class Representative system.

In the School of Medicine, Medical Sciences & Nutrition we operate a system of course representatives, who are elected from within each course. Any student registered within a course that wishes to represent a given group of students can stand for election as a class representative. You will be informed when the elections for class representative will take place.

What will it involve?

It will involve speaking to your fellow students about the course you represent. This can include any comments that they may have. You will attend a Staff-Student Liaison Committee and you should represent the views and concerns of the students within this meeting. As a representative, you will also be able to contribute to the agenda. You will then feedback to the students after this meeting with any actions that are being taken.

Training

Training for class representatives will be run by the Students Association. Training will take place within each half-session. For more information about the Class representative system visit www.ausa.org.uk or email the VP Education & Employability vped@abdn.ac.uk . Class representatives are also eligible to undertake the STAR (Students Taking Active Roles) Award with further information about this co-curricular award being available at: www.abdn.ac.uk/careers.

Problems with Coursework

If students have difficulties with any part of the course that they cannot cope with, alone they should notify the course coordinator immediately. If the problem relates to the subject matter general, advice would be to contact the member of staff who is teaching that part of the course. Students with registered disabilities should contact the medical sciences office, (medsci@abdn.ac.uk) (based in the Polwarth Building, Foresterhill) to ensure that the appropriate facilities have been made available. Otherwise, you are strongly encouraged to contact any of the following as you see appropriate:

- Course student representatives
- Course co-ordinator
- Convenor of the Medical Sciences Staff/Student Liaison Committee (Professor Gordon McEwan)
- Personal Tutor
- Medical Sciences Disabilities Co-ordinator (Dr Derryck Shewan)

All staff are based at Foresterhill and we strongly encourage the use of email or telephone the Medical Sciences Office. You may have a wasted journey travelling to Foresterhill only to find staff unavailable.

If a course has been completed and students are no longer on campus (i.e. work from second half session during the summer vacation), coursework will be kept until the end of Fresher's Week, during the new academic year. After that point, unclaimed student work will be securely destroyed.

Course Reading List

- McArdle W.D., Katch F.I., Katch V.L.. Exercise Physiology: Energy, Nutrition & Human Performance 6th edition. Publishers: Lippincott Williams and Wilkins*
- Silverthorn D.U. – Human Physiology; An Integrated Approach 4th Edition (2006), Pearson. ISBN 0321396235
- Seeley R.R, Stephens T. D., Tate P., Anatomy and Physiology, 6th edition, 2003, 0-07-235113-6, McGraw-Hill

*Recommended text

Lecture Synopsis

A series of lectures and demonstration on performance, fitness and survival and how it can be improved by different conditioning principles

Lecture 1: Course Introduction – Dr Michael Scholz

Outline of the course and general introduction. Information about group allocations and general procedures for assessments and practicals.

Performance & Survival - Prof Alison Jenkinson

Lecture 2: Integrative physiology.

Cellular systems work together in an organised way to form organ systems. In this lecture we shall consider how organ systems may work together to influence the whole-body response to a range of external factors and influences.

Lecture 3: How normal is normal?

A wide range of intrinsic and extrinsic factors that can influence 'normal' bodily functions. These are as diverse as gender, age, health, fitness and environmental conditions. Is it possible to define normal values for bodily functions under 'resting' or 'active' conditions?

Measuring Performance – Prof Stephen Davies

Lecture 4: Adapt to survive 1

This lecture will address how the cardiovascular system adapts in the short term during exercise to deliver the increased O2 supply that is needed by your muscles.

Lecture 5: Adapt to survive 2

This lecture will address the effects of training and how the cardiovascular system of athletes adapts in the longer term to supply their greater O2 needs.

Lecture 6: Demonstration

A short demonstration to illustrate how easy it is to measure some cardiorespiratory variables, but difficult to use them estimate fitness, performance, or health.

Lecture 7: Why do physiologists love Fick so much?

The Fick Principle, first described in 1870 can be applied to a variety of purposes. This lecture will illustrate how it can be used to measure cardiac output and the difficulties in doing this.

Survival of the Fittest - Prof Alison Jenkinson

Lecture 8: Walking the tightrope.

Diet and health. The balance between deficiency, optimum intakes and toxicity.

Lecture 9: Eat to succeed.

Diet and performance. How altering dietary macronutrients can affect performance and survival

Lecture 10: A little goes a long way

Diet and performance. How altering dietary micronutrients can affect performance and survival.

Lecture 11: Too fat for that or too thin to win?

Size and survival, size and performance. Measurement of body size.

Lecture 12: The rhythm of life

A day in the life of humans. Circadian rhythms - 24h biological rhythms.

Lecture 13: Food for thought

Food as fuel. An introduction to measuring energy expenditure and energy requirements.

Performance in the environment - Dr Arimantas Lionikas

Lecture 14: If you can't stand the heat …

The physiological responses seen during exercise in a hot environment and their effects on performance.

Lecture 15: Exercise during an ice age, or maybe just Scotland!

The physiological effects seen during exercise in the cold and their effects on performance.

Lecture 16: Exercise for the high-flyer.

Many athletic events take place at high altitude and this has profound changes in human physiology and exercise performance.

Lecture 17: Extreme environments, how does the body adapt?

Discussion of the adaptations of the human body to constant exposure to extreme temperature and altitudes.

Lecture 18: Exercising in a big city, good idea?

When the Olympic Games was awarded to Beijing in 2008 several questions were asked about the effect of air pollutants on exercise performance and health.

Lecture 19: Diving Physiology – How low can you go?

Diving is a relatively common past time and, without a proper understanding of the physiological changes occurring, can be dangerous.

Performance and Health - Dr Derek Scott

Lecture 20: Where do we start? The Physiology of Gestation & Childhood

Prenatal growth and development. Role of maternal physiology in protecting the foetus. Challenges of infancy, childhood and adolescence. Difficulties in comparing children and adults physiologically.

Lecture 21: The Physiology of Ageing – do we really wear out?

Definition of different stages of life. Who are the elderly? Theories of ageing. Physiological changes of ageing. Functional problems associated with ageing. How do we physiologically define death? Implications of the ageing population.

Lecture 22: Cellular Adaptation, Injury & Death

How do cells adapt to increased work demands or threats to survival? Definition of atrophy, hypertrophy, dysplasia and metaplasia. Intracellular accumulation of substances. Causes of cell injury. Mechanisms of cell injury. Reversible cell injury and cell death. Cellular ageing.

Lecture 23: Red Alert! How Do We Respond To Physiological Emergencies?

One of the most elegant and conserved examples of integrative physiology is the “fight or flight” response which we exhibit during times of stress or emergency. However, during physiological emergencies or threats to survival, a whole host of physiological processes adapt significantly with the primary aim of keeping us alive until we can get help. This lecture will use the example of someone who has been severely injured and explain what physiological adaptations occur in order to promote survival.

Lecture 24: Does One Drug Fit All?

When we are ill, most of us are willing to take medications to assist our recovery. By and large, most drugs on the market work well and safely for the majority of the population, but there are individuals for whom this is not the case. These people may require alternative therapies to be used, or the dosage/formulation of the medication to be altered. We will consider the physiological reasons for this variation in responses to drug therapy (i.e. effects of blood flow, BMI/body composition, ethnicity, gender, genetics, renal and liver function, drug therapy in children, drug therapy in the older adult).

Lecture 25: How Do Medications Promote or Hamper Health & Survival?

This lecture will briefly consider how drugs promote health and survival, and how they may improve our physiological performance. This will also cover how we can use medications to enable the population to exercise more, which has far more profound and beneficial effects than any single drug. We use examples from the previous lectures to illustrate how medications can be used for different purposes such as promoting exercise and mobility, eradicating threats to survival, encouraging growth and development or assisting failing organ systems to carry out their functions. We will also explore why drugs may have side-effects. Finally, we will review why some governments are considering exercise and psychological techniques as replacements for various drug therapies.

Nature of work – Daniel Sutton

Lecture 26: Principles of Training

Introduction into the nature of work, basic work and conditioning principles including duration, frequency, intensity, overload and specificity.

Lecture 27: Demand Vs Capability – Can you meet the targets?

What do we want to be able to do? What do we need to improve on to do this? How can we train towards this? Duration, frequency and intensity and the balance between demand and personal capability

Lecture 28: Demand Vs Capability - The 3 R's…rest, recovery and reversibility

The 3 R's…rest, recovery and reversibility Balance between demand and capability for different types of work.

Lecture 29: Periodisation – how to timetable your work!

Can Strength, endurance, speed, power and flexibility be trained at the same time and with the same program? Periodisation covers the planning of a training programme into smaller manageable cycles.

Adaptations to training - Dr Michael Scholz

Lecture 30: Neuromuscular adaptation for fitness

Changes in nervous system and skeletal muscle in response to physical strains. Comparisons and mechanisms.

Lecture 31: Metabolic adaptations for fitness – what are the players?

Which tissues and organs are involved in improved fitness, how is improved performance achieved, comparison between acute responses and long term adaptations, VO_2max as an indicator of performance.

Lecture 32: Metabolic adaptations for fitness - penny-wise and pound-foolish? – energetic housekeeping

How we get fit by changing carbohydrate, fat and amino acid stores and utilisation, effects of duration, intensity and fitness.

Lecture 33: Metabolic adaptations for fitness – why do different strains produce different adaptations?

Reaction of the metabolism to different types of physical activity – endurance versus resistance – aerobic versus anaerobic.

Practical/Lab/Tutorial Work

Practical/Lab Work

You are expected to attend all practical sessions to obtain a class certificate. There are three practicals and each practical will be run four times (see timetable for details). During the course registration each student must subscribe to one of the four practical groups (Group 1-4). Swaps of practical groups are only possible if discussed with the course-coordinator in advance and are only possible in special cases and if spare capacity is available, because the number of students allowed in each group is limited by Health and Safety considerations. Practical sessions will be based at the Aberdeen Sports Village. Attendance will be taken at all practical classes. It is important you bring sports apparel and footwear with you since you will play an active part in the class and mild physical exertion may be required.

Course Work

There will be four MCQ assessments and one problem solving assessment during the course. Each MCQ assessment will contain circa 25 questions and will carry 17.5% of the final mark. The problem-solving assessment will carry 30% of the final mark. The assessments are invigilated online assessments in a computer classroom. Only one submission per assessment is permitted. Some example questions will be provided to prepare for the problem-solving assessment. Detailed instructions will be available on MyAberdeen.

University Policies

Students are asked to make themselves familiar with the information on key education policies, available here. These policies are relevant to all students and will be useful to you throughout your studies. They contain important information and address issues such as what to do if you are absent, how to raise an appeal or a complaint and how the University will calculate your degree outcome.

These University wide education policies should be read in conjunction with this programme and/or course handbook, in which School specific policies are detailed. These policies are effective immediately, for the 2023/24 academic year. Further information can be found on the University's Infohub webpage or by visiting the Infohub.

The information included in the institutional area for 2023-24 includes the following:

- Assessment
- Feedback
- Academic Integrity
- Absence
- Student Monitoring/ Class Certificates
- Late Submission of Work
- Student Discipline
- The co-curriculum
- Student Learning Service (SLS)
- Professional and Academic Development
- Graduate Attributes

- Email Use
- MyAberdeen
- Appeals and Complaints

Where to Find the Following Information:

C6/C7- University of Aberdeen Homepage > Students > Academic Life > Monitoring and Progress > Student Monitoriung (C6 & C7)

https://www.abdn.ac.uk/students/academic-life/student-monitoring.php#panel5179

Absences- To report absences you should use the absence reporting system tool on Student Hub. Once you have successfully completed and sent the absence form you will get an email that your absence request has been accepted. The link below can be used to log onto the Student Hub Website and from there you can record any absences you may have.

Log In - Student Hub (ahttps://www.abdn.ac.uk/studenthub/loginbdn.ac.uk)

Submitting an Appeal- University of Aberdeen Homepage > Students > Academic Life > Appeals and Complaints

https://www.abdn.ac.uk/students/academic-life/appeals-complaints-3380.php#panel2109

Academic Language & Skills support

For students whose first language is not English, the Language Centre offers support with Academic Writing and Communication Skills.

Academic Writing

- Responding to a writing task: Focusing on the question
- Organising your writing: within & between paragraphs
- Using sources to support your writing (including writing in your own words, and citing & referencing conventions)
- Using academic language
- Critical Thinking
- Proofreading & Editing

Academic Communication Skills

- Developing skills for effective communication in an academic context
- Promoting critical thinking and evaluation
- Giving opportunities to develop confidence in communicating in English
- Developing interactive competence: contributing and responding to seminar discussions
- Useful vocabulary and expressions for taking part in discussions

More information and how to book a place can be found here

Medical Sciences Common Grading Scale

Grade	Grade Point	% Mark	Category	Honours Class	Description
A1	22	90-100	Excellent	First	• Outstanding ability and critical thought • Evidence of extensive reading • Superior understanding •The best performance that can be expected from a student at this level
A2	21	85-89			
A3	20	80-84			
A4	19	75-79			
A5	18	70-74			
B1	17	67-69	Very Good	Upper Second	• Able to argue logically and organise answers well • Shows a thorough grasp of concepts • Good use of examples to illustrate points and justify arguments • Evidence of reading and wide appreciation of subject
B2	16	64-66			
B3	15	60-63			
C1	14	57-59	Good	Lower Second	• Repetition of lecture notes without evidence of further appreciation of subject • Lacking illustrative examples and originality • Basic level of understanding
C2	13	54-56			
C3	12	50-53			
D1	11	47-49	Pass	Third	• Limited ability to argue logically and organise answers • Failure to develop or illustrate points • The minimum level of performance required for a student to be awarded a pass
D2	10	44-46			
D3	9	40-43			
E1	8	37-39	Fail	Fail	• Weak presentation • Tendency to irrelevance • Some attempt at an answer but seriously lacking in content and/or ability to organise thoughts
E2	7	34-36			
E3	6	30-33			
F1	5	26-29	Clear Fail	Not used for Honours	• Contains major errors or misconceptions • Poor presentation
F2	4	21-25			
F3	3	16-20			
G1	2	11-15	Clear Fail/Abysmal		• Token or no submission
G2	1	1-10			
G3	0	0			

SR1503 Course Timetable: 2023-2024

Date	Time	Place	Subject	Session	Staff
Week 26					
Mon 22 Jan	12:00-13:00	ZooLT	Registration and Introduction - Performance and Survival	Lecture	MES/AL
Tue 23 Jan	09:00-10:00	ZooLT	Integrative physiology	Lecture	AMJ
Thu 25 Jan	12:00-13:00	ZooLT	How normal is normal?	Lecture	AMJ
Fri 26 Jan	12:00-13:00	ZooLT	Private study	Study	
Week 27					
Mon 29 Jan	12:00-13:00	ZooLT	Adapt to survive 1	Lecture	AL
Tue 30 Jan	09:00-10:00	ZooLT	Adapt to survive 2	Lecture	AL
Thu 1 Feb	12:00-13:00		Private study	Study	
Fri 2 Feb	12:00-13:00	MT1	Why do physiologists love Fick so much?	Lecture	AL
Week 28					
Mon 5 Feb	10:00-10:30	EW S81	Assessment 1 Group 1a	Assessment	MES
	10:30-11:00	EW S81	Assessment 1 Group 1b		
	11:00-11:30	EW S81	Assessment 1 Group 2a		
	11:30-12:00	EW S81	Assessment 1 Group 2b		
	12:00-12:30	EW S81	Assessment 1 Group 3a		
	12:30-13:00	EW S81	Assessment 1 Group 3b		
Tue 6 Feb	09:00-10:00	ZooLT	Walking the tightrope	Lecture	AMJ
	15:00-17:00	ASV	Flexibility (Group A1)	Practical	S&E
Thu 8 Feb	12:00-13:00	ZooLT	Eat to succeed - Survival of the fittest	Lecture	AMJ
	15:00-17:00	ASV	Flexibility (Group B1)	Practical	S&E
Fri 9 Feb	12:00-13:00	MT1	A little goes a long way	Lecture	AMJ
Week 29					
Mon 12 Feb	12:00-13:00	ZooLT	Too fat for that or too thin to win?	Lecture	AMJ
Tue 13 Feb	09:00-10:00		Private study time	Study	N/A
	15:00-17:00	ASV	Flexibility (Group A2)	Practical	S&E
Thu 15 Feb	12:00-13:00	ZooLT	The rhythm of life	Lecture	AMJ
	15:00-17:00	ASV	Flexibility (Group B2)	Practical	S&E
Fri 16 Feb	12:00-13:00	MT1	Food for thought	Lecture	AMJ
Week 30					
Mon 19 Feb	10:00-10:30	EW S81	Assessment 2 Group 1a	Assessment	MES
	10:30-11:00	EW S81	Assessment 2 Group 1b		
	11:00-11:30	EW S81	Assessment 2 Group 2a		
	11:30-12:00	EW S81	Assessment 2 Group 2b		
	12:00-12:30	EW S81	Assessment 2 Group 3a		
	12:30-13:00	EW S81	Assessment 2 Group 3b		
Tue 20 Feb	09:00-10:00	ZooLT	If you can't stand the heat ……Performance in the environment	Lecture	AL
Thu 22 Feb	12:00-13:00	ZooLT	Private study time	Study	N/A
Fri 23 Feb	12:00-13:00	MT1	Exercise during an ice age, or maybe just Scotland!	Lecture	AL
Week 31					
Mon 26 Feb	12:00-13:00	ZooLT	Exercise for the high-flyer	Lecture	AL

Tue 27 Feb	09:00-10:00	ZooLT	Extreme environments, how does the body adapt?	Lecture	AL
	15:00-17:00	ASV	Speed and Power (Group A)	Practical	S&E
Thu 29 Feb	12:00-13:00	ZooLT	Exercising in a big city, good idea?	Lecture	AL
	15:00-17:00	ASV	Speed and Power (Group B)	Practical	S&E
Fri 1 Mar	12:00-13:00	MT1	Diving Physiology – How low can you go?	Lecture	AL
Week 32					
Mon 4 Mar	10:00-10:30	EW S81	Assessment 3 Group 1a	Assessment	MES
	10:30-11:00	EW S81	Assessment 3 Group 1b		
	11:00-11:30	EW S81	Assessment 3 Group 2a		
	11:30-12:00	EW S81	Assessment 3 Group 2b		
	12:00-12:30	EW S81	Assessment 3 Group 3a		
	12:30-13:00	EW S81	Assessment 3 Group 3b		
Tue 5 Mar	09:00-10:00	ZooLT	Where do we start? The Physiology of Gestation & Childhood	Lecture	DAS
	15:00-17:00	ASV	Endurance (Group A)	Practical	S&E
Thu 7 Mar	12:00-13:00	ZooLT	The Physiology of Ageing – do we really wear out?	Lecture	DAS
	15:00-17:00	ASV	Endurance (Group B)	Practical	S&E
Fri 8 Mar	12:00-13:00	MT1	Cellular Adaptation, Injury & Death	Lecture	DAS
Week 33					
Mon 11 Mar	12:00-13:00	ZooLT	Red Alert! How Do We Respond To Physiological Emergencies?	Lecture	DAS
Tue 12 Mar	09:00-10:00	ZooLT	Does One Drug Fit All?	Lecture	DAS
Thu 14 Mar	12:00-13:00	ZooLT	How Do Medications Promote or Hamper Health & Survival?	Lecture	DAS
Fri 15 Mar	12:00-13:00	MT1	Lecture 1 - Principles of Training	Lecture	DS
Week 34					
Mon 18 Mar	12:00-13:00	ZooLT	Lecture 2 – Demand Vs Capability	Lecture	DS
Tue 19 Mar	09:00-10:00	ZooLT	Lecture 3 - Rest, recovery & reversibility	Lecture	DS
	15:00-17:00	ASV	Strength (Group A1)	Practical	S&E
Thu 21 Mar	12:00-13:00	ZooLT	Lecture 4 - Periodisation	Lecture	DS
	15:00-17:00	ASV	Strength (Group B1)	Practical	S&E
Fri 22 Mar	12:00-13:00	MT1	Neuromuscular adaptation for fitness	Lecture	MES
Week 35					
Mon 25 Mar	10:00-10:30	EW S81	Assessment 4 Group 1a	Assessment	MES
	10:30-11:00	EW S81	Assessment 4 Group 1b		
	11:00-11:30	EW S81	Assessment 4 Group 2a		
	11:30-12:00	EW S81	Assessment 4 Group 2b		
	12:00-12:30	EW S81	Assessment 4 Group 3a		
	12:30-13:00	EW S81	Assessment 4 Group 3b		
Tue 26 Mar	09:00-10:00	ZooLT	Metabolic adaptations for fitness – the players	Lecture	MES
	15:00-17:00	ASV	Strength (Group A2)	Practical	S&E
Thu 28 Mar	12:00-13:00	ZooLT	Metabolic adaptations for fitness – penny-wise and pound-foolish? – energetic housekeeping	Lecture	MES
	15:00-17:00	ASV	Strength (Group B2)	Practical	S&E
Fri 29 Mar	12:00-13:00	MT1	Metabolic adaptations for fitness – why do different strains produce different adaptations?	Lecture	MES
Week 36- REVISION WEEK-					
Mon 1 Apr	10:00-10:30	EW S81	Assessment 1 Group 1a	Assessment	MES
	10:30-11:00	EW S81	Assessment 1 Group 1b		

	11:00-11:30	EW S81	Assessment 1 Group 2a		
	11:30-12:00	EW S81	Assessment 1 Group 2b		
	12:00-12:30	EW S81	Assessment 1 Group 3a		
	12:30-13:00	EW S81	Assessment 1 Group 3b		

Staff

- Dr Arimantas Lionikas (AL), Medical Science
- Dr Alison Jenkinson (AMJ), Medical Sciences
- Dr Michael Scholz (MES), Medical Sciences (Course Co-ordinator)
- Dr Derek Scott (DAS), Medical Sciences
- Daniel Sutton (DS), Medical Sciences

University Sports & Exercise Team (S & E)

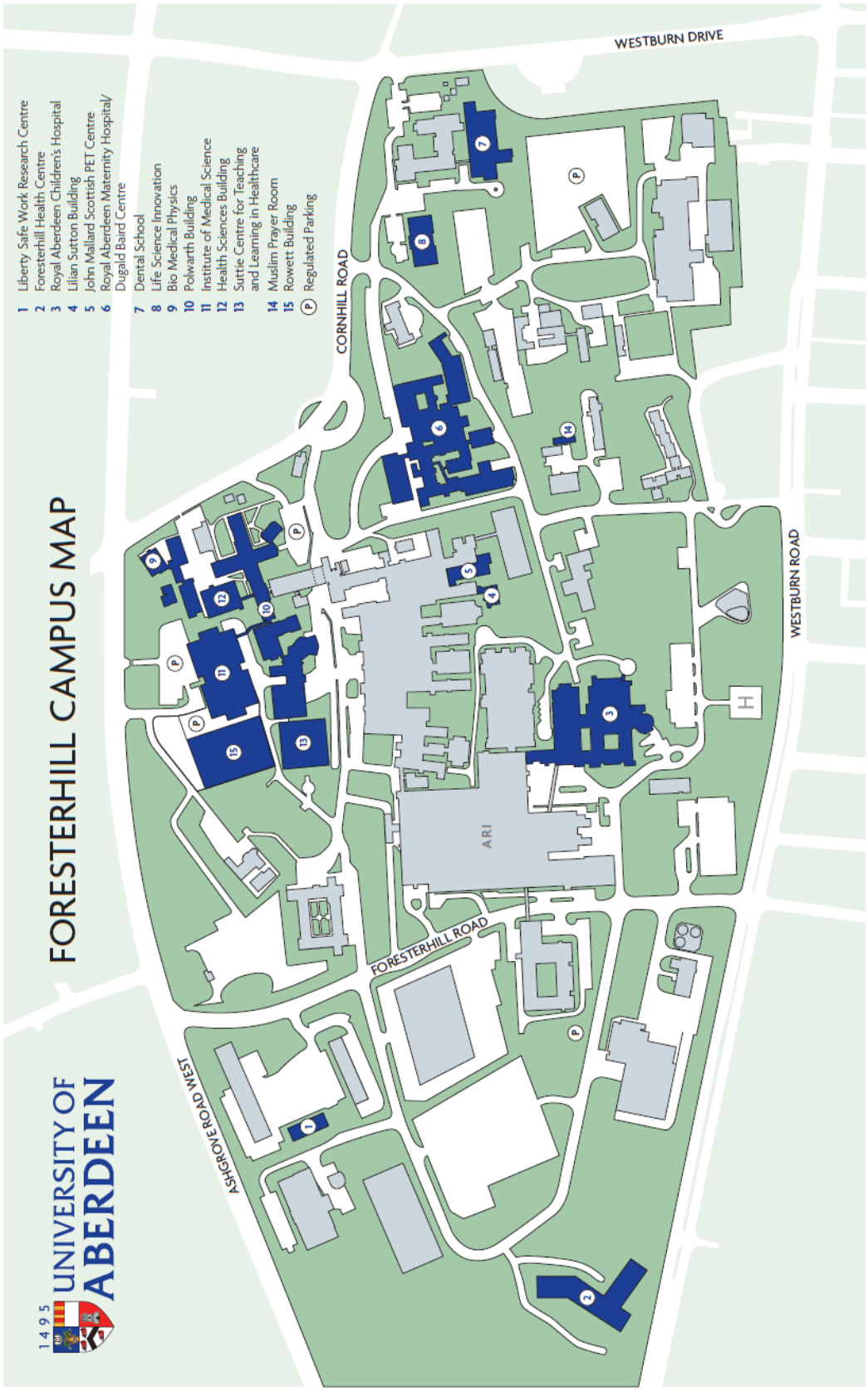
- Gillian Kerr (GK)
- Christine Roberts (CR)

Venues

ZooLT Zoology Lecture Theatre G18
MT1 Meston 1
ASV Aberdeen Sports Village

Campus Maps - Foresterhill

Floor Plans


FORESTERHILL CAMPUS MAP
1 Liberty Safe Work Research Centre
2 Foresterhill Health Centre
3 Royal Aberdeen Children's Hospital
4 Lilian Sutton Building
5 John Mallard Scottish PET Centre
6 Royal Aberdeen Maternity Hospital/ Dugald Baird Centre
7 Dental School
8 Life Science Innovation
9 Bio Medical Physics
10 Polwarth Building
11 Institute of Medical Science
12 Health Sciences Building
13 Suttie Centre for Teaching and Learning in Healthcare
14 Muslim Prayer Room
15 Rowett Building
(P) Regulated Parking
WESTBURN DRIVE
CORNHILL ROAD
WESTBURN ROAD
FORESTERHILL ROAD
ASHGROVE ROAD WEST
ARI
UNIVERSITY OF ABERDEEN
1495

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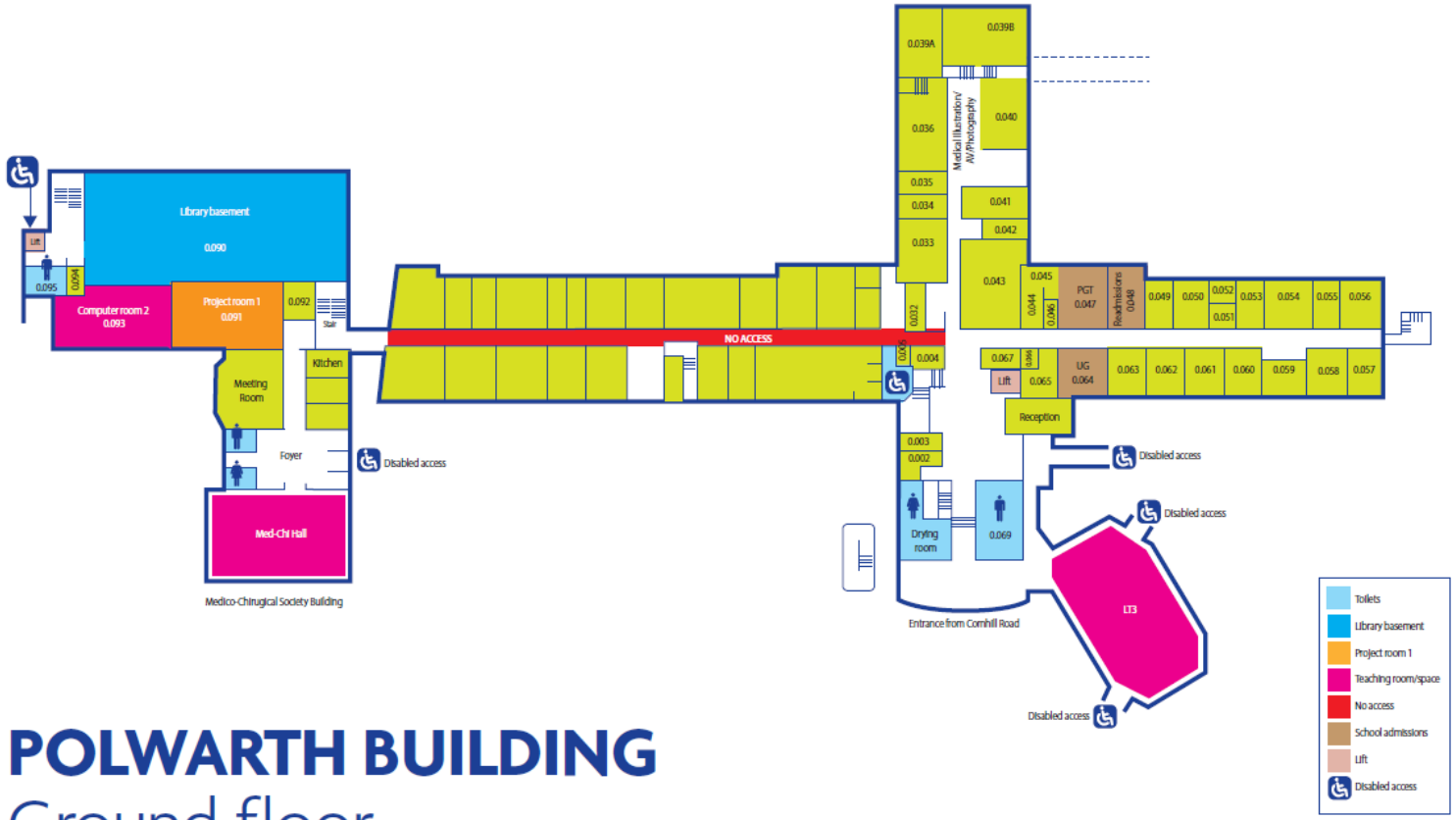
POLWARTH BUILDING

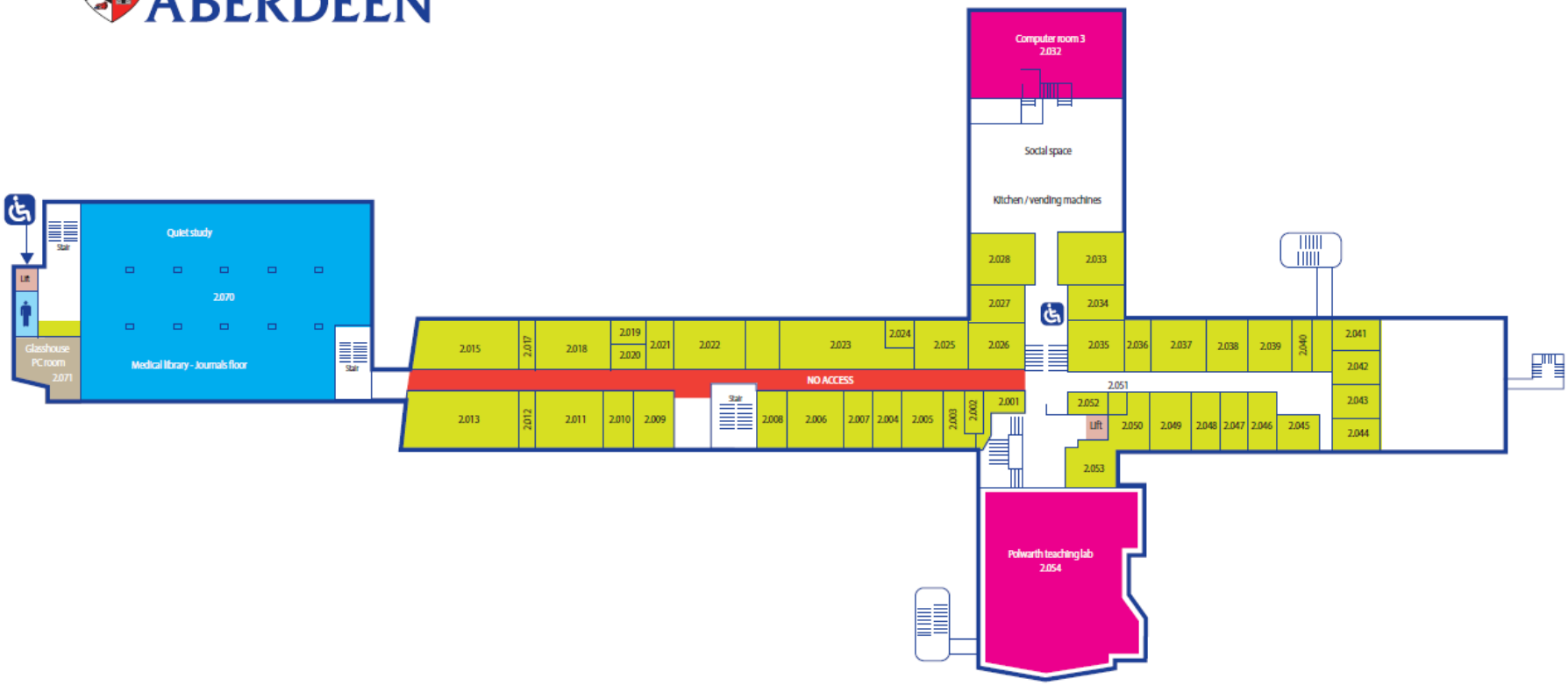
First floor

1495 UNIVERSITY OF ABERDEEN



POLWARTH BUILDING
Ground floor

1495 UNIVERSITY OF ABERDEEN



POLWARTH BUILDING

Second floor