Introduction

Welcome

Welcome to Physiology Essentials 100.

We hope that you will find this course interesting, engaging, and relevant to your chosen professions. For some of you, this will be the first time that you have been required to learn how the body works, whereas for others, the basic principles may seem familiar. Regardless of your previous experience, anyone can succeed in this course. A variety of tasks will be assessed to assist in developing a range of the UniSA Graduate Qualities, preparing you for your chosen career. Topics will be covered in lectures and tutorials, with an emphasis on enabling you to apply the knowledge gained in this course to a variety of situations.

Best wishes and happy studying!

Course Teaching Staff

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        P2-13
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* Please refer to your Course homepage for the most up to date list of course teaching staff.

School Contact Details

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School Website: http://www.unisa.edu.au/Health-Sciences/Schools/Pharmacy-and-Medical-Sciences/

Additional Contact Details
If you need to contact the Course Coordinators by email, please use this email address:

BIOL1051Coordinators@unisa.edu.au
Course Overview

Prerequisite(s)
There are no prerequisite courses to be completed before this course can be undertaken.

Corequisite(s)
There are no corequisite courses to be completed in conjunction with this course.

Course Aim
To gain an understanding of the physiological dimensions of body function in health and disease.

Course Objectives
On completion of this course, students should be able to:

CO1. Apply a range of scientific and medical terminology to describe the functions of the human body.

CO2. Describe the normal structure and functions of cells and tissues and explain how cells and tissues are arranged into organs and organ systems.

CO3. Discuss the functions of the nervous, muscular, skeletal, integumentary, cardiovascular, respiratory, endocrine, immune, digestive, and urinary systems, and genetic inheritance.

CO4. Explain how the organ systems interact with each other to sustain life, maintain homeostasis, and enable body function and movement.

CO5. Apply knowledge of normal body function to explain how specific diseases affect the function of cells, tissues, and organ systems.

Upon completion of this course, students will have achieved the following combination of Graduate Qualities and Course Objectives:

<table>
<thead>
<tr>
<th>Graduate Qualities being assessed through the course</th>
</tr>
</thead>
<tbody>
<tr>
<td>GQ1</td>
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<tr>
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<tr>
<td>CO1</td>
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<td>CO2</td>
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<td>CO3</td>
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<td>CO4</td>
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<tr>
<td>CO5</td>
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</table>

Graduate Qualities
A graduate of UniSA:

GQ1. operates effectively with and upon a body of knowledge of sufficient depth to begin professional practice

GQ2. is prepared for life-long learning in pursuit of personal development and excellence in professional practice

GQ3. is an effective problem solver, capable of applying logical, critical, and creative thinking to a range of problems

GQ4. can work both autonomously and collaboratively as a professional

GQ5. is committed to ethical action and social responsibility as a professional and citizen

GQ6. communicates effectively in professional practice and as a member of the community
GQ7. demonstrates international perspectives as a professional and as a citizen

Course Content
Introductory biology: characteristics and classification of living things, genetics, homeostasis. Study of body functions and structure with emphasis on changes through the lifespan: blood and fluids, the cardiovascular system and circulation, haemostasis, the muscular, nervous, endocrine, digestive, respiratory and urinary systems; metabolism and nutrition; immunity. Integrative physiology: examination of systemic function, control and interaction between systems.

Teaching and Learning Arrangements
Lecture 3 hours x 13 weeks
Tutorial 2 hours x 9 weeks

Unit Value
4.5 units

Additional assessment requirements
There are no additional assessment requirements identified for this course.
Learning Resources

Textbook(s)
You will need continual access to the following text(s) to complete this course. The library does not hold multiple copies of the nominated text books. It is strongly recommended that you purchase the book(s). An eBook version may be available but please check with the library as availability is limited and dependent on licence arrangements. http://www.library.unisa.edu.au


Materials to be accessed online

learnonline course site
All other course related materials can be accessed through your learnonline course site which you will be able to access from the my Courses section in myUniSA.

myUniSA
All study related materials can be accessed through: https://my.unisa.edu.au
Assessment Details
Details of assessment submission and return are listed under each assessment task. Assessment tasks will be returned to you within two to three weeks of submission.

If the Course Coordinator allows submissions in hard copy format, you will be required to attach an Assignment Cover Sheet which is available on the learnonline student help and in myUniSA.

Assessment Summary

<table>
<thead>
<tr>
<th>#</th>
<th>Form of assessment</th>
<th>Length</th>
<th>Duration</th>
<th>Weighting</th>
<th>Due date (Adelaide Time)</th>
<th>Submit via</th>
<th>Objectives being assessed</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Quiz</td>
<td>-</td>
<td>50 minutes</td>
<td>30%</td>
<td>See assessment activities for details</td>
<td>See assessment activities for details</td>
<td>CO1, CO2, CO3</td>
</tr>
<tr>
<td>2</td>
<td>Group assignment</td>
<td>-</td>
<td>25 minutes</td>
<td>20%</td>
<td>Your scheduled tutorial class during Week 7</td>
<td>In person</td>
<td>CO1, CO2, CO3, CO4, CO5</td>
</tr>
<tr>
<td>3</td>
<td>Examination</td>
<td>-</td>
<td>2 hours</td>
<td>50%</td>
<td>Other - TBA</td>
<td>In person at designated venue</td>
<td>CO1, CO2, CO3</td>
</tr>
</tbody>
</table>

Feedback proformas
The feedback proforma is available on your learnonline course site. It can be accessed via the Feedback Form link in the Course Essentials block.

Assessments

Quiz (Graded)

Assessment Activities

<table>
<thead>
<tr>
<th>Name</th>
<th>Sub-weighting</th>
<th>Due date (Adelaide Time)</th>
<th>Submit via</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quiz 1 - Lecture content covered during Weeks 1-3</td>
<td>All activities equally weighted</td>
<td>23 Mar 2017, 11:00 PM</td>
<td>learnonline</td>
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<tr>
<td>Quiz 2 - Lecture content covered during Weeks 5-7</td>
<td>All activities equally weighted</td>
<td>4 May 2017, 11:00 PM</td>
<td>learnonline</td>
</tr>
<tr>
<td>Quiz 3 - Lecture content covered during weeks 9-11</td>
<td>All activities equally weighted</td>
<td>1 Jun 2017, 11:00 PM</td>
<td>learnonline</td>
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</tbody>
</table>

This assessment task will evaluate body of knowledge (Graduate Quality 1). The assessment will consist of three quizzes conducted throughout the study period. Each quiz will contain 16 multiple choice questions and will be completed online, through the Physiology Essentials 100 learnonline site. The duration of each quiz will be 16 minutes (timed). The topics covered in each quiz will be listed in the title of each quiz and the questions will be drawn from content covered in the lectures. The quiz can be completed at any time prior to the submission date and time. Students will get ONE attempt at each quiz. Variations to assessments and extension to assessment task deadlines will be considered in line with the policy outlined in section 7 of the current University Assessment Policies and Procedures Manual. Each quiz mark will be counted towards assessment and the quiz cannot be repeated. Students have the right to sight their quiz answers, but are not entitled to an electronic or hard copy. Re-marking will be considered in line with the policy outlined in the current University Assessment Policies and Procedures Manual. Re-submission is not available. Students will be notified (electronically) of their individual mark within 15 working days of the quiz completion date. A feedback session on the quiz material will take place in a following tutorial.
Group oral presentation (Graded)

The assessment task will involve forming into small groups of students and then preparing and delivering a group oral presentation on one prescribed topic. Formation of the groups will occur during the first tutorial class (maximum of five groups per tutorial class) and the process will involve selecting a number out of a hat. Each group will then select one topic for their group presentation. The list of available topics include:

- Achilles tendon rupture
- Delayed onset muscle soreness (DOMS)
- Melanoma
- Osteoporosis
- Long bone fracture and repair

Only one group per topic is permitted (to avoid multiple presentations on the same topic).

Key concepts that should be included in the group presentation are:

a) Brief explanation of the normal function and physiology of the relevant organ system (10 marks):
   - include a statement on how this organ system contributes to homeostasis
   - e.g. for asthma, this would involve a brief explanation of the role (function) of the respiratory system, how structures within the respiratory system perform these functions (physiology), and how the respiratory system maintains homeostasis
   - if more than one organ system is affected by the disease or condition, then complete this section on the primary organ system affected.

b) Brief explanation of the pathophysiology of the disease or condition (10 marks):
   - include a brief definition/explanation of the disease/condition (e.g. Asthma is an obstructive lung disease that affects the respiratory system)
   - include a brief explanation about the abnormal cellular, tissue, and/or organ processes that occur and how these changes alter homeostasis and/or function of the organ system (e.g. for asthma, this would involve a brief explanation of i) the immune response to exposure to an airborne allergen/irritant, ii) how this immune response leads to bronchospasm, vascular congestion, mucus secretion, thickening of the airways, removal of the epithelial lining, and fibrosis (excess connective tissue), iii) how these changes result in bronchial hyper-responsiveness and airway obstruction, iv) how the airway obstruction prevents adequate gas exchange, and v) how the inadequate gas exchange alters homeostasis)
   - include a statement about the cause (aetiology) of these changes (if known)

c) Brief description of one clinical manifestation (sign or symptom) of the disease/condition and how it relates to the pathophysiology (3 marks):
   - e.g. for asthma, this would involve mentioning shortness of breath (dyspnoea) and that this results from hypersensitivity to inhaled irritants resulting in bronchospasm, oedema, excess mucus production, and ultimately airway obstruction.

d) Brief description of one current treatment practice for the disease/condition and how the treatment relates to the pathophysiology (3 marks):
   - e.g. for asthma, this would involve mentioning a medication such as salbutamol (Ventolin) and explaining that this medication dilates the bronchioles by activating beta_2 receptors in the lungs.

e) Provide one example of a new treatment practice for the disease/condition that scientists are currently investigating (3 marks):
   - The example must come from a scientific study that has been published in a scientific journal within the last two years. Searching for studies published in scientific journal articles involves the use of a scientific database. An example of a scientific database that specialises in physiological and medical research is PubMed (also called Medline). PubMed is essentially like an internet search engine, but only for scientific studies published in physiological and medical journals. Your tutor will demonstrate how to locate and use PubMed in the first tutorial.
   - List the source of the information (i.e. authors, journal article title, journal title, volume, page range) on the slide.

The information requested in items a) to d) above must be sourced from physiology and/or medical textbooks. This will ensure that the information presented is accurate.

Students will prepare the above information for delivery in an oral presentation. The group will present the oral presentation to their tutor and tutorial classmates during the tutorial class scheduled for Week 7 (i.e. between 24th-28th April 2017). The maximum duration of the oral presentation is 16 minutes and all members of the group are to participate equally in the oral presentation. Your tutor will time your presentation and your group
will be asked to stop should the presentation exceed 16 minutes. Only content delivered during the 16 minute time allocation will be marked.

The oral presentation should be delivered with the aid of PowerPoint software (your tutor will provide the projector). The maximum number of slides permitted is 16. Inclusion of video footage within the presentation is not permitted. All text on the slide must be in your own words, except for clinical and/or physiological terminology. If you would like to include still images (e.g. photos, figures, graphs, etc.) that you did not create yourself, then you will need to list the full source of the image on your slide (to comply with copyright law).

Each student must electronically submit a final copy of the groups PowerPoint presentation (i.e. the file containing up to 16 slides that will be presented on the day). Electronic submission of the PowerPoint presentation is to be completed via GradeBook, by Friday 21st April 2017. Two files should be submitted: the PowerPoint presentation and the PowerPoint slides saved in PDF format. Your tutor will download your PowerPoint presentation from GradeBook for you to use on the day (use of USB files is not permitted). The files will be checked automatically for originality by Turnitin, a software package that indicates whether content has been cut and pasted from elsewhere. Plagiarism is not tolerated by the University and serious penalties are associated with this. All cases of suspected plagiarism will be forwarded to the Academic Integrity Officer in the School of Pharmacy and Medical Sciences.

In Week 5, each student will be asked to provide their tutor with feedback on the contribution of each member of the group to the preparation and delivery of the oral presentation. The peer review will involve completing a template during the tutorial class. The peer review template will be treated in a confidential manner and will not be shown to other members of the group. The purpose of this peer review is for the tutor to identify and help solve any problems that have emerged within the group and to note students that have not contributed to preparation of the assignment.

The assessment marking criteria is available on the Learnonline course site. The assessment due dates are:
- oral presentation: your scheduled tutorial class during Week 7 (24th-28th April 2017)
- PowerPoint slides: Friday 21st April 2017

Delivery of the group presentation after this date is not permitted. Absent members of the group will receive 0 marks, unless a request for an extension has been granted by the course coordinator prior to the submission date. Requests for a late submission due to unexpected or exceptional circumstances will be considered by the course coordinator on a case-by-case basis and in accordance with Section 7 of the University Assessment Policies and Procedures Manual. Re-submission will not be considered and no supplementary assignment is available. The assessment mark and feedback sheet will be returned to students via Learnonline (GradeBook) within 3 weeks of the submission date as per University policy.

Examination
The examination will assess material covered in all of the lectures and tutorials. The examination will involve multiple choice and short answer questions. The duration of the examination will be 2 hours. The examination will be conducted in line with the policy outlined in Section 6 of the current University Assessment Policies and Procedures Manual. Variation to examination will be considered in line with the policy outlined in section 6 of the current University Assessment Policies and Procedures Manual. Students with ENTEXT cards are entitled to an additional 10 mins per hour of examination and may bring a bilingual dictionary into the examination venue. These items must not be enhanced or tampered with in any way.

Exam arrangements
Students will receive advance notice of scheduled examination. All students are required to sit their examination at the scheduled date, time and location irrespective of any conflict with a planned holiday or special event. Internal students are required to sit their examination on-campus or at the central exam venue.
More information about examination procedures and arrangements for students can be found by consulting the relevant policy http://w3.unisa.edu.au/policies/manual/default.asp (Section 6)
Supplementary Assessment

Supplementary assessment or examination offers students an opportunity to gain a supplementary pass (SP) and is available to all students under the following conditions unless supplementary assessment or examination has not been approved for the course:

1. if the student has achieved a final grade between 45-49 per cent (F1) in a course
2. if a student who has successfully completed all of the courses within their program, with the exception of two courses in their final study period, a supplementary assessment or examination may be granted where the final grade in either or both of these courses, is less than 45 percent (F1 or F2)

More information about supplementary assessment is available in section 7.5 of the Assessment Policy and Procedures Manual.

Important information about all assessment

All students must adhere to the University of South Australia’s policies about assessment:

Students with disabilities or medical conditions

Student with disabilities or medical conditions or students who are carers may be entitled to a variation or modification to standard assessment arrangements. See Section 7 of the Assessment Policy and Procedures Manual (APPM) at: http://w3.unisa.edu.au/policies/manual/default.asp

Students can register for an Access Plan with UniSA Disability Service. It is important to make contact early to ensure that appropriate support can be implemented or arranged in a timely manner. See the Disability Hub for more information: http://www.unisa.edu.au/Disability/Current-students

Students are advised there is a deadline to finalise Access Plan arrangements for examinations. Further information is available at: http://i.unisa.edu.au/campus-central/Exams_R/Before-the-Exam/Alternative-exam-arrangements/

Deferred Assessment or Examination

Deferred assessment or examination is available for the course

Special Consideration

Special consideration is available for this course. Note: Special consideration cannot be granted for a deferred assessment or examination, or a supplementary assessment or examination. APPM 7.7.6

Variations to assessment tasks

Variation to assessment methods, tasks and timelines may be provided in:

Unexpected or exceptional circumstances, for example bereavement, unexpected illness (details of unexpected or exceptional circumstances for which variation may be considered are discussed in clauses 7.8 - 7.10 of the Assessment Policy and Procedures Manual). Variation to assessment in unexpected or exceptional circumstances should be discussed with your course coordinator as soon as possible.

Special circumstances, for example religious observance grounds, or community services (details of special circumstances for which variation can be considered are discussed in clause 7.11 of the Assessment Policy and Procedures Manual). Variations to assessment in expected circumstances must be requested within the first two weeks of the course (or equivalent for accelerated or intensive teaching).
Extra time in exams (ENTEXT) and the use of a dictionary may be available to some students (for example, Indigenous Australian students and those of non-English speaking background) as follows:

- extra time for reading or writing. This will be an extra ten minutes per hour for every hour of standard examination time, and
- the use of an English language or bilingual print dictionary (without annotations). (APPM 7.2.2)


Academic Integrity

Academic integrity is the foundation of university life and is fundamental to the reputation of UniSA and its staff and students. Academic integrity means a commitment by all staff and students to act with honesty, trustworthiness, fairness, respect and responsibility in all academic work.

An important part of practising integrity in academic work is showing respect for other people's ideas, and being honest about how they have contributed to your work. This means taking care not to represent the work of others as your own. Using another person's work without proper acknowledgement is considered Academic Misconduct, and the University takes this very seriously.

The University of South Australia expects students to demonstrate the highest standards of academic integrity so that its degrees are earned honestly and are trusted and valued by its students and their employers. To ensure this happens, the University has policies and procedures in place to promote academic integrity and manage academic misconduct. For example, work submitted electronically by students for assessment will be examined for copied and un-referenced text using the text comparison software Turnitin [http://www.turnitin.com](http://www.turnitin.com).


Submission and return of assessment tasks

See 'Assessment Summary' above for details.

Action from previous evaluations

Physiology Essentials 100 undergoes evaluation each year. Your feedback is important to us and we use this feedback to make ongoing improvements to the course. An example of a recent action that stemmed from last years evaluation is simplifying the structure of the group presentation and improving the instructions for this assessment item. In addition, lectures and tutorials have been restructured to facilitate understanding of the content and knowledge retention.

Unplanned learnonline outages

Any learnonline outages will be dealt with on a case-by-case basis.
# Course Calendar

## Study Period 2 - 2017

<table>
<thead>
<tr>
<th>Weeks</th>
<th>Topic</th>
<th>Tutorial</th>
<th>Notes</th>
<th>Assessment Details (Adelaide Time)</th>
<th>Public Holidays</th>
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<tbody>
<tr>
<td>13 - 19 February</td>
<td>Pre-teaching</td>
<td>No Tutorial</td>
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<tr>
<td>20 - 26 February</td>
<td>Pre-teaching</td>
<td>No Tutorial</td>
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<tr>
<td>1 27 February - 5 March</td>
<td>Introduction; Terminology; Homeostasis</td>
<td>No Tutorial</td>
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<td>2 06 - 12 March</td>
<td>Cells</td>
<td>No Tutorial</td>
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<tr>
<td>3 13 - 19 March</td>
<td>Tissue and Integumentary Skeletal System</td>
<td>Cells; Group presentation details; Concept Maps as a Study Guide</td>
<td></td>
<td>Monday 13th March: Adelaide Cup Day Alternate arrangements to be provided.</td>
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<tr>
<td>4 20 - 26 March</td>
<td>Nervous System</td>
<td>Tissues and Skeletal System</td>
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<td>Quiz: Quiz 1 - Lecture content covered during Weeks 1-3 due 23 Mar 2017, 11:00 PM</td>
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<tr>
<td>5 27 March - 2 April</td>
<td>Muscular System</td>
<td>Nervous System</td>
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<td>6 03 - 9 April</td>
<td>System Linking: Movement Movement Blood</td>
<td>Muscular System</td>
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<td>10 - 16 April</td>
<td>Mid-break</td>
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<td>Week</td>
<td>Dates</td>
<td>Topics</td>
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<td>1</td>
<td>17 - 23 April</td>
<td>Mid-break</td>
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<td>2</td>
<td>24 - 30 April</td>
<td>Immune System, Endocrine System</td>
<td>Group Presentations</td>
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<td>Tuesday 25th April: Anzac Day</td>
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<td>Alternative arrangements to be provided.</td>
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<td>3</td>
<td>01 - 7 May</td>
<td>Endocrine System, Blood and Immune System</td>
<td>Quiz: Quiz 2 - Lecture content covered during Weeks 5-7 due 04 May 2017, 11:00 PM</td>
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<td>4</td>
<td>08 - 14 May</td>
<td>Urinary System, Endocrine System</td>
<td>System Linking: Blood Transport</td>
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<tr>
<td>5</td>
<td>15 - 21 May</td>
<td>Cardiovascular System, Urinary System</td>
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<td>6</td>
<td>22 - 28 May</td>
<td>Respiratory System, Cardiovascular System</td>
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<td>7</td>
<td>29 May - 4 June</td>
<td>Digestive System, No Tutorial</td>
<td>Quiz: Quiz 3 - Lecture content covered during weeks 9-11 due 01 Jun 2017, 11:00 PM</td>
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<td>8</td>
<td>05 - 11 June</td>
<td>System Linking: Eating and The Meaning of Food, System Linking: Individual variability</td>
<td>No Tutorial</td>
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<td>Revision: Exam Practice</td>
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<td>Date Range</td>
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<td>Notes</td>
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<tr>
<td>12 - 18 June</td>
<td>Swot-vac</td>
<td>Monday 12th June: Queen's Birthday</td>
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<td>19 - 25 June</td>
<td>Exam week</td>
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<tr>
<td>26 June - 2 July</td>
<td>Exam week</td>
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