

课程详述

COURSE SPECIFICATION

以下课程信息可能根据实际授课需要或在课程优化之后产生变动。如对课程有任何疑问，请联系授课教师。

The course information as follows may be subject to change, either during the session because of unforeseen circumstances, or following review of the course at the end of the session. Queries about the course should be directed to the course instructor.

1.	课程名称 Course Title	The Science of Harry Potter
2.	授课院系 Originating Department	语言中心 Center for Language Education
3.	课程编号 Course Code	CLE042
4.	课程学分 Credit Value	2
5.	课程类别 Course Type	通识选修课程 General Education (GE) Elective Courses
6.	授课学期 Semester	春季 Spring / 夏季 Summer / 秋季 Fall
7.	授课语言 Teaching Language	英文 English
8.	授课教师、所属学系、联系方式 Instructor(s), Affiliation & Contact (For team teaching, please list all instructors)	语言中心教师
9.	实验员/助教、所属学系、联系方式 Tutor/TA(s), Contact	无 NA
10.	选课人数限额(可不填) Maximum Enrolment (Optional)	

11. 授课方式 Delivery Method	讲授 Lectures	习题/辅导/讨论 Tutorials	实验/实习 Lab/Practical	其它(请具体注明) Other (Please specify)	总学时 Total
学时数 Credit Hours	32	0	0	0	32
12. 先修课程、其它学习要求 Pre-requisites or Other Academic Requirements	CLE030 EAP				
13. 后续课程、其它学习规划 Courses for which this course is a pre-requisite	N/A				
14. 其它要求修读本课程的学系 Cross-listing Dept.	N/A				

教学大纲及教学日历 SYLLABUS

15. 教学目标 Course Objectives

The Science of Harry Potter is a course in which students will explore the connections (historically, currently, and in the future) between what has been called “magic” and what we have now come to call science. Using the novel as a launching point, students will connect themes from fantasy and magic to developments in science and technology, thereby fostering critical thinking skills such as synthesizing, drawing connections across realms, and analyzing consequences. Language skills in vocabulary, listening, reading, and speaking will also be emphasized. The course will cover topics such as how Harry Potter’s magic mirror serves as inspiration for combining neuroscience and artificial-intelligence in treatment of depression patients or how NASA scientists have used the Harry Potter game of Quidditch and flying broomsticks to create prototypes of the self-propelling vehicles of tomorrow. Ultimately, the course seeks to develop skills that students can apply to all their studies in the future, such as analyzing and annotating texts to prepare for class discussions, using technology to enhance their vocabulary acquisition, adjusting authentic listening texts for their own self-study needs, and most importantly, applying critical thinking skills to the ways in which they react to and interact with the world around them.

16. 预达学习成果 Learning Outcomes

By the end of this course, students will:

- apply critical thinking skills such as synthesis, analysis, questioning, and hypothesizing to both annotating texts and participating in seminar-style discussions;
- employ speaking strategies and language chunks to describe scientific processes, compare, persuade, predict, hypothesize, agree, disagree, critique, and synthesize;
- understand and use successful vocabulary acquisition strategies such as the use of spaced repetition study apps, frequency-based word lists, and corpus-based dictionaries;
- be aware of and utilize methods for improving listening and pronunciation skills by using tools such as audiobooks, podcasts, and film;

17. 课程内容及教学日历 (如授课语言以英文为主, 则课程内容介绍可以用英文; 如团队教学或模块教学, 教学日历须注明主讲人)

Course Contents (in Parts/Chapters/Sections/Weeks. Please notify name of instructor for course section(s), if this is a team teaching or module course.)

Please see attached course schedule.

18. 教材及其它参考资料 **Textbook and Supplementary Readings**

The main materials for this course are: novel, audiobook files, podcasts, and instructor's slides. Additional materials will be provided to students via Blackboard. Sources for classroom instruction may include:

Required Textbook: Rowling, J.K. (1999). *Harry Potter and the Sorcerer's Stone*. New York, NY: Scholastic.

Supplemental Textbook:

Reference Materials: Highfield, R. (2002). *The Science of Harry Potter: How Magic Really Works*. New York, NY: Penguin.

Reference Materials:

Berridge, E. (2017). *Why tech needs the humanities*. Ted Talk. Retrieved from: https://www.ted.com/talks/eric_berridge_why_tech_needs_the_humanities?language=en

Connor, A.M., Karmokar, S. & Whittington, C. (2015) *From STEM to STEAM: Strategies for enhancing engineering & technology education*. *International Journal of Engineering Pedagogies*, 5(2), 37-47.

Herzing, D. (2018). *Dolphins: Breaking the Code*. The Changing Seas Documentary Series. South Florida Public Broadcasting Service. Retrieved from: <https://www.changingseas.tv/season-10/1001/>

Merriman, H. (2018, April 12). *How did China ban ivory?* The Inquiry (BBC Podcast). Retrieved from: <https://www.bbc.co.uk/programmes/w3cswqt2>

Merriman, H. (2018, July 12). *Can we ever understand animals?* The Inquiry (BBC Podcast). Retrieved from: <https://www.bbc.co.uk/programmes/w3cswqth>

National Geographic. (2018). *Pangolins: The most trafficked mammal you've never heard of*. Video retrieved from: <https://video.nationalgeographic.com/video/101-videos/00000162-b55cd63a-a76e-bf7d57720000>

Root-Bernstein, R. (2008). *Arts Foster Academic Success: Avocations of Nobel, National, Academy, Royal Society, and Sigma Xi Members*. *Journal of Psychology Science and Technology*, 1(2), 51-63.

Vedantam, S. (2017, March 20). *The Scarcity Trap: Why we keep digging when we're stuck in a hole*. Hidden Brain (NPR Podcast). Retrieved from: <https://www.npr.org/2017/03/20/520587241/the-scarcity-trap-why-we-keep-digging-when-were-stuck-in-a-hole>

Vedantam, S. (2017, Dec 4). *The sorting hat: What can a personality test tell us about who we are?* Hidden Brain (NPR Podcast). Retrieved from: <https://www.npr.org/2017/12/04/568365431/what-can-a-personality-test-tell-us-about-who-we-are>

Vedantam, S. (2018, Dec 13). *Yum and Yuck. Hidden Brain (NPR Podcast)*. Retrieved from: <https://www.npr.org/2018/12/13/676467019/yum-and-yuck-the-psychology-of-what-we-eat-and-what-we-spit-out>

课程评估 **ASSESSMENT**

19. 评估形式 Type of Assessment	评估时间 Time	占考试总成绩百分比 % of final score	违纪处罚 Penalty	备注 Notes
出勤 Attendance		15	*** More than 3 absences = failure of the course	
课堂表现 Class Performance		35		Online interactive BB tasks, Discussion Boards, and Seminar Preparation
小测验 Quiz				
课程项目 Projects		25	*** MUST	Students will research a scientific

		complete this project on time to receive a passing grade	endeavor that correlates with themes in the novel
平时作业 Assignments	25	*** MUST complete the synthesis assignment on time to receive a passing grade	Synthesis Assignment
期中考试 Mid-Term Test			
期末考试 Final Exam			
期末报告 Final Presentation			
其它（可根据需要 改写以上评估方式） Others (The above may be modified as necessary)			

20. 记分方式 **GRADING SYSTEM**

- A. 十三级等级制 **Letter Grading**
 B. 二级记分制（通过/不通过） **Pass/Fail Grading**

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课程审批 REVIEW AND APPROVAL

21. 本课程设置已经过以下责任人/委员会审议通过
This Course has been approved by the following person or committee of authority

Center for Language Education

Week	Topic/Learning Objective	Materials and Assignments	Class Format
Week 1	<p>What can magic teach us about science?</p> <p>The importance of STE(A)M over STEM</p> <hr/> <p>Introduction to the course:</p> <ul style="list-style-type: none"> • Objectives • Blended format • Blackboard layout • Schedule • Grading system • Rules <p>Reading Strategy: Writing critical open ended questions to prepare for advanced seminar-style discussions</p>	<p>Root-Bernstein, R. (2008). <i>Arts Foster Academic Success: Avocations of Nobel, National, Academy, Royal Society, and Sigma Xi Members</i>. <i>Journal of Psychology Science and Technology</i>, 1(2), 51-63.</p> <p><i>Harry Potter and the Sorcerer's Stone</i> Chapter 1 & Audiobook clips</p> <p>Materials</p> <ul style="list-style-type: none"> • Welcome & Syllabus Review • Navigating the BB site together • Mini-lecture: Combining the Arts and Science • Mini-lecture: Annotating when you read (Open-ended questioning) • Discussion: What connects magic & science? Why study Harry Potter at a STEM university in China? <p>HW for next week:</p> <ul style="list-style-type: none"> • Read HP Chapters 1-3 and write 2 critical open-ended discussion questions. Print and bring to class • Download the Quizlet App and register 	Live Zoom + BB + WeChat Mix
Week 2	<p>Vocabulary Strategies: Using spaced repetition to study vocabulary (Quizlet App)</p> <p>Listening Strategies: Using audio books for self-study</p> <p>Reading Strategies: Annotating a text and writing a reading response paper</p>	<p><i>Harry Potter and the Sorcerer's Stone</i> Chapters 1-3 & Audiobook clips</p> <p>HW due in class today:</p> <ul style="list-style-type: none"> • 2 critical open-ended discussion questions about Chapters 1-3 <p>In Class</p> <ul style="list-style-type: none"> • Seminar-style small group discussion • Quizlet tutorial and practice • Using audio books to increase reading speed and improve pronunciation • Annotating texts (Making connections & Analyzing Passages) • Practice applying annotation skills to reading response papers <p>HW for next week:</p> <ul style="list-style-type: none"> • Review vocabulary from Chapters 1-3 (Quizlet App) • Bring your headphones and be ready to use Quizlet. 	Live Zoom + BB + WeChat Mix

Week	Topic/Learning Objective	Materials and Assignments	Class Format
Week 3	<p>Connecting Harry’s ability to speak with snakes (Parseltongue) with scientists quest for 2-way communication with animals</p> <hr/> <p>Critical Thinking Skills: Making comparisons and connections between fiction and reality</p> <p>Listening Strategies: Organizing your notes in order to later create a verbal summary</p> <p>Speaking Strategies: Simplifying your language for good verbal summaries</p>	<p>Herzing, D. (2018). <i>Dolphins: Breaking the Code</i>. The Changing Seas Documentary Series. South Florida Public Broadcasting Service. Retrieved from: https://www.changingseas.tv/season-10/1001/</p> <p>Merriman, H. (2018, July 12). <i>Can we ever understand animals? The Inquiry (BBC Podcast)</i>. Retrieved from: https://www.bbc.co.uk/programmes/w3cswqth Four scientists are interviewed on their work regarding human-animal communication.</p> <p>HW due in class today:</p> <ul style="list-style-type: none"> • Bring your headphones and Quizlet loaded on a device <p>Materials:</p> <ul style="list-style-type: none"> • Mini-lecture: How to move from academic notes to a verbal summary • Dolphins: Breaking the Code: Videos and note-taking practice • Discussion Board: Looking forward, what might animal-human communication bring? <p>HW for next week:</p> <ul style="list-style-type: none"> • Read HP Chapters 4-5 and write 2 critical open-ended discussion questions. Post on Padlet (see Padlet tutorial on BB to register for a Padlet Account). • Review vocabulary from Chapters 4-5 (Quizlet App) 	Live Zoom + BB + WeChat Mix

Week	Topic/Learning Objective	Materials and Assignments	Class Format
Weeks 4	<p>Connecting the magic of the Harry Potter world to real-life science through your own research presentations</p> <hr/> <p>Critical Thinking Skills: Making comparisons and connections between fiction and reality</p> <p>Speaking Strategies: Simplifying your language for good verbal summaries</p>	<p><i>Harry Potter and the Sorcerer's Stone</i> Chapters 4-5 & Audiobook clips</p> <p>HW due in class before class starts <u>Week 4</u>:</p> <ul style="list-style-type: none"> • 2 critical open-ended discussion questions about Chapters 4-5 posted on Padlet <p>In Class</p> <ul style="list-style-type: none"> • Introduction of the presentation assignment • Building on verbal summary skills from Week 3 (applying those skills to your own presentations) <p>HW for next week:</p> <ul style="list-style-type: none"> • Read the presentation Assignment carefully (see PDF on BB) • Send Allison your presentation topic request by WeChat. First Come, First Serve!!! 	Live Zoom + BB + WeChat Mix
Week 5	<p>Magical creatures vs. today's endangered animals</p> <hr/> <p>Listening Skills: Listening for numbers and figures in academic videos</p> <p>Speaking Strategies: Creating and using slides successfully in an academic presentation</p>	<p>National Geographic. (2018). <i>Pangolins: The most trafficked mammal you've never heard of</i>. Video retrieved from: https://video.nationalgeographic.com/video/101-videos/00000162-b55d-d63a-a76e-bf7d57720000</p> <p>Review before class today:</p> <ul style="list-style-type: none"> • Presentation Assignment PDF <p>Online Materials</p> <ul style="list-style-type: none"> • Welcome WeChat discussion • Mini-lecture: Creating and using slides successfully in an academic presentation • Pangolins: Video & note-taking practice • Discussion Board: What similarities are there between the way animals are exploited in the Harry Potter world and in ours? <p>• You MUST complete all the tasks on BB in order to receive credit for this week's class and earn homework points toward your final grade.</p> <p>HW for next week:</p> <ul style="list-style-type: none"> • Read HP Chapters 6-7 and write 2 critical open-ended discussion questions on PADLET! • Presenters from Group 1 should be ready to workshop 	Live Zoom + BB + WeChat Mix

Week	Topic/Learning Objective	Materials and Assignments	Class Format
Week 6	<p>Connecting the magic of the Harry Potter world to real-life science through your own research presentations</p> <hr/> <p>Critical Thinking Skills: Making comparisons and connections between fiction and reality</p> <p>Listening & Speaking Skills: Clarifying and offering feedback diplomatically</p>	<p><i>Harry Potter and the Sorcerer's Stone</i> Chapters 6-7 & Audiobook clips</p> <p>HW due in class today:</p> <ul style="list-style-type: none"> • 2 critical open-ended discussion questions about Chapters 6-7 • Presenters from Group 1 should be ready to workshop <p>In Class</p> <ul style="list-style-type: none"> • Seminar-style small group discussion • Workshopping student presentations on the following topics: Owls (bionics), Hagrid (giant genetics), Wizards' Robes (material science), Wizards Wands (computer science), Platform 9& 3/4 (wormholes, physics) <p>HW for next week:</p> <ul style="list-style-type: none"> • Review vocabulary from Chapters 6-7 (Quizlet App) 	Live Zoom + BB + WeChat Mix
Week 7	<p>Connecting the Hogwarts Sorting Hat to psychological personality tests</p> <hr/> <p>Critical Thinking Skills: Making comparisons and connections between fiction and reality</p> <p>Listening Skills: Recognizing tangents in narratives and learning to focus on key ideas</p>	<p>Vedantam, S. (2017, Dec 4). <i>The sorting hat: What can a personality test tell us about who we are?</i> Hidden Brain (NPR Podcast). Retrieved from: https://www.npr.org/2017/12/04/568365431/what-can-a-personality-test-tell-us-about-who-we-are</p> <p>Review before class today:</p> <ul style="list-style-type: none"> • Vocabulary from Chapters 6-7 (Quizlet App) <p>Online Materials</p> <ul style="list-style-type: none"> • Welcome WeChat discussion • The Sorting Hat & Personality Tests: Videos, vocabulary, and note-taking practice • Discussion Board: Are personality tests a useful tool or a risky path to discrimination? <p>• You MUST complete all the tasks on BB in order to receive credit for this week's class and earn homework points toward your final grade.</p> <p>HW for next week:</p> <ul style="list-style-type: none"> • Read HP Chapters 8-10 and write 2 critical open-ended discussion questions. Print and bring to class • Presenters from Group 2 should be ready to workshop • Review Vocabulary Review vocabulary from Chapters 8-10 (Quizlet App) 	Live Zoom + BB + WeChat Mix

Week	Topic/Learning Objective	Materials and Assignments	Class Format
Week 8	<p>Connecting the magic of the Harry Potter world to real-life science through your own research presentations</p> <hr/> <p>Critical Thinking Skills: Making comparisons and connections between fiction and reality</p> <p>Listening & Speaking Skills: Clarifying and offering feedback diplomatically</p>	<p><i>Harry Potter and the Sorcerer's Stone</i> Chapters 8-10 & Audiobook clips</p> <p>HW due in class today:</p> <ul style="list-style-type: none"> • 2 critical open-ended discussion questions about Chapters 8-10 • Presenters from Group 2 should be ready to workshop <p>In Class</p> <ul style="list-style-type: none"> • Seminar-style small group discussion • Workshopping student presentations on the following topics: Sorting Hat (neuro-technology), Potions (chemistry), Flying Broomsticks (engineering), Fluffy the 3-headed dog (genetics), Regrowing Bones (bio-technology) <p>HW for next week:</p> <ul style="list-style-type: none"> • Review vocabulary from Chapters 8-10 (Quizlet App) 	Live Zoom + BB + WeChat Mix
Week 9	<p>Connecting Bernie Botts' Every Flavor Beans to the science of disgust (biology and psychology)</p> <hr/> <p>Critical Thinking Skills: Making comparisons and connections between fiction and reality</p> <p>Listening Skills: Drawing inferences based on anecdotes</p>	<p>Vedantam, S. (2018, Dec 13). Yum and Yuck. <i>Hidden Brain (NPR Podcast)</i>. Retrieved from: https://www.npr.org/2018/12/13/676467019/yum-and-yuck-the-psychology-of-what-we-eat-and-what-we-spit-out</p> <p>Review before class today:</p> <ul style="list-style-type: none"> • Vocabulary from Chapters 8-10 (Quizlet App) <p>Online Materials</p> <ul style="list-style-type: none"> • Welcome WeChat discussion • Yum & Yuck podcast: Videos, vocabulary, and note-taking practice • Discussion Board: What can the podcast teach us about "disgust" and cultural sensitivity? • You MUST complete all the tasks on BB in order to receive credit for this week's class and earn homework points toward your final grade. <p>HW for next week:</p> <ul style="list-style-type: none"> • Read HP Chapters 11-13 and write 2 critical open-ended discussion questions. • Presenters from Group 3 should be ready to workshop • Review Vocabulary Review vocabulary from Chapters 11-13 (Quizlet App) 	Live Zoom + BB + WeChat Mix

Week	Topic/Learning Objective	Materials and Assignments	Class Format
Week 10	<p>Connecting the magic of the Harry Potter world to real-life science through your own research presentations</p> <hr/> <p>Critical Thinking Skills: Making comparisons and connections between fiction and reality</p> <p>Listening & Speaking Skills: Clarifying and offering feedback diplomatically</p>	<p><i>Harry Potter and the Sorcerer's Stone</i> Chapters 11-13 & Audiobook clips</p> <p>HW due in class today:</p> <ul style="list-style-type: none"> • 2 critical open-ended discussion questions about Chapters 11-13 • Presenters from Group 3 should be ready to workshop <p>In Class</p> <ul style="list-style-type: none"> • Seminar-style small group discussion • Workshopping student presentations on the following topics: Invisibility Cloak (material science), Mirror of Erised (AI), Real Quidditch (anthropology), Potions Dying Out (environmental science & chemistry) <p>HW for next week:</p> <ul style="list-style-type: none"> • Take a break 😊 	Live Zoom + BB + WeChat Mix
Week 11	<p>Connecting Diagon Alley and magical ingredients to the exploitation of animals</p> <hr/> <p>Critical Thinking Skills: Making comparisons and connections between fiction and reality</p> <p>Listening Skills: Navigating non-native accents in English</p>	<p><i>Vedantam, S. (2017, March 20). The Scarcity Trap: Why we keep digging when we're stuck in a hole. Hidden Brain (NPR Podcast). Retrieved from: https://www.npr.org/2017/03/20/520587241/the-scarcity-trap-why-we-keep-digging-when-were-stuck-in-a-hole</i></p> <p>Review before class today:</p> <ul style="list-style-type: none"> • Vocabulary from Chapters 14-15 (Quizlet App) <p>Online Materials</p> <ul style="list-style-type: none"> • Welcome WeChat discussion • The Scarcity Trap: Videos, vocabulary, and note-taking practice • Discussion Board: Have you ever judged someone harshly that may have been suffering from the scarcity trap? <p>• You MUST complete all the tasks on BB in order to receive credit for this week's class and earn homework points toward your final grade.</p> <p>HW for next week:</p> <ul style="list-style-type: none"> • Read HP Chapters 14-15 and write 2 critical open-ended discussion questions. Print and bring to class • Presenters from Group 4 should be ready to workshop • Reading Response #2 due to BB before class starts Week 12 	Live Zoom + BB + WeChat Mix

Week	Topic/Learning Objective	Materials and Assignments	Class Format
Week 12	<p>Connecting the magic of the Harry Potter world to real-life science through your own research presentations</p> <hr/> <p>Critical Thinking Skills: Making comparisons and connections between fiction and reality</p> <p>Listening & Speaking Skills: Clarifying and offering feedback diplomatically</p>	<p><i>Harry Potter and the Sorcerer's Stone</i> Chapters 14-15 & Audiobook clips</p> <p>HW due in class today:</p> <ul style="list-style-type: none"> • 2 critical open-ended discussion questions about Chapters 14-15 • Presenters from Group 4 should be ready to workshop <p>In Class</p> <ul style="list-style-type: none"> • Seminar-style small group discussion • Workshopping student presentations on the following topics: Dragons (bionics), Griffins (genetic hybrids), Elixir of Life (biology), Philosopher's Stone (chemistry) 	Live Zoom + BB + WeChat Mix
Week 13	<p>Connecting The Mirror of Erised to the psychology of scarcity</p> <hr/> <p>Critical Thinking Skills: Making comparisons and connections between fiction and reality</p> <p>Listening Skills: Understanding implied conclusions</p>	<p>Berridge, E. (2017). <i>Why tech needs the humanities</i>. Ted Talk. Retrieved from: https://www.ted.com/talks/eric_berridge_why_tech_needs_the_humanities?language=en</p> <p>Online Materials:</p> <ul style="list-style-type: none"> • Welcome WeChat discussion • Why Tech needs the humanities: Videos, vocabulary, and note-taking practice • Discussion Boards: a) What connections between magic and science have resonated with you most this semester? b) Does tech really need the humanities? Is STE(A)M more useful than STEM? <p>• You MUST complete all the tasks on BB in order to receive credit for this week's class and earn homework points toward your final grade.</p> <p>HW for next week:</p> <ul style="list-style-type: none"> • Read HP Chapters 16-17 and write 2 critical open-ended discussion questions. • Presenters from Group 5 should be ready to workshop • Review Vocabulary Review vocabulary from Chapters 16-17 (Quizlet App) 	Live Zoom + BB + WeChat Mix

Week	Topic/Learning Objective	Materials and Assignments	Class Format
Week 14	<p>Connecting the magic of the Harry Potter world to real-life science through your own research presentations</p> <hr/> <p>Critical Thinking Skills: Making comparisons and connections between fiction and reality</p> <p>Listening & Speaking Skills: Clarifying and offering feedback diplomatically</p>	<p><i>Harry Potter and the Sorcerer's Stone</i> Chapter 16-17 & Audiobook clips</p> <p>HW due in class today:</p> <ul style="list-style-type: none"> • 2 critical open-ended discussion questions about Chapters 16-17 • Presenters from Group 5 should be ready to workshop <p>In Class</p> <ul style="list-style-type: none"> • Seminar-style small group discussion • Workshopping student presentations on the following topics: Giant Squid (biology), Bernie Botts' (biology & psychology), Werewolves & Vampires (biology), Original Dumbledore (history of science) <p>HW for next week:</p> <ul style="list-style-type: none"> • Start preparing your synthesis assignment (due Week 16) 	Live Zoom + BB + WeChat Mix
Week 15	Sytheszing and Digging Deeper	In-Class Reading Responses and Roving Discussions in response to the film/book combo	Live Zoom + BB + WeChat Mix
Week 16	Wrapping things up	<p>JK Rowling's Graduation Speech at Harvard</p> <p>"Read the World" Challenge</p> <p>HW due before class today:</p> <ul style="list-style-type: none"> • Synthesis Assignment 	Live Zoom + BB + WeChat Mix