

**WAUNAKEE COMMUNITY SCHOOL DISTRICT  
BOARD OF EDUCATION CURRICULUM COMMITTEE MEETING**

Monday, January 22, 2024

3:00 PM

Waunakee Community School District  
905 Bethel Circle  
Waunakee, WI 53597

Members of the public may attend Board of Education meetings in-person, and will be asked to check in with District personnel when you arrive.

Public comments will be limited to 3 minutes. The Board will allow 30 Minutes for public comments.

Public comments may be sent to Rebecca McDonough at [district\\_administrator@waunakee.k12.wi.us](mailto:district_administrator@waunakee.k12.wi.us) up to one hour before the start of the Board meeting. All comments will be reviewed by the Board members. Emailed comments will be reviewed by the board but not read out loud. Emailed comments sent during any part of the board meeting (Board Development, Closed session, Open session) will be forwarded to the board but may or may not be reviewed by the board until after the board adjourns. Comments must include the commentator's name, address, and must identify their connection to the District (if any) and any group they are representing in order to be considered by the Board.

If you would like to address the Board in-person during the public comments section of the meeting, you will be greeted in the lobby of the building, asked to check in with District personnel when you arrive so that you can be recognized and address the Board when your name is called.

A recording of the meeting will be posted on the District webpage within 24 hours of the meeting time.

**AGENDA**

**I. CALL TO ORDER**

**II. ROLL CALL**

**III. APPROVE AGENDA**

**IV. PUBLIC COMMENTS**

**V. NEW COURSE PROPOSAL-HERITAGE BILINGUAL  
ENVIRONMENTAL SCIENCE**

**3**

Tim Schell

The course is the second in the sequence that begins with Bilingual Biology and was originally envisioned during our planning for the bilingual program at the high school. Although this proposal is coming later than we would normally process, with the targeted audience the high school believes there will be no problems incorporating it into our scheduling process this year. This course has been reviewed and is recommended for approval.

**VI. ROBOTICS UPDATE**

Tim Schell

Tim Schell will provide an update on our work in robotics and coding. This will include some information on where we offer robotics and coding, coding in some of our comparable districts, and exploring a robotics club as an out of school or extracurricular program.

**VII. ITEMS FOR FUTURE MEETINGS**

February 15-Alternative Education

March-Act 20 Update, First look at summer curriculum project requests and textbook requests.

**VIII. ADJOURN**

“Any person who has a qualifying disability as defined by the Americans with Disabilities Act who requires assistance with access or materials should contact the Waunakee Community School District Office at 849-2000, 905 Bethel Circle Drive Waunakee, WI 53597, at least twenty-four hours prior to the commencement of the meeting so that necessary arrangements can be made to accommodate the request.”

NEW COURSE APPROVAL FORM  
(Due October 1, 2023)

Date: **1/9/24**

Department Chairperson/Building Coordinator: \_\_\_\_\_

Department: \_\_\_\_\_ Building: **High School**

Proposed Course Title: **Heritage Bilingual Environmental Studies** Grade Level: **9-12**

Course Length: **1 year** Credits: **1.0**

Requirement/Elective: \_\_\_\_\_

Meeting Frequency: **Every other day - 90 minute class**

Anticipated Enrollment: **10 - 15+ students**

Prerequisites: **Students have an overall English language proficiency (ELP) level of 1-2 and are Heritage Spanish speakers**

Principal's Approval: \_\_\_\_ 1/9/2024 \_\_\_\_\_

Comments:

Review & Discuss w/Activities Director for NCAA Eligibility –

Date: \_\_\_\_ 1/9/2024 \_\_\_\_\_

Comments:

Review & Discuss Within the Building Between Departments –

Date: \_\_\_\_ 1/15/2024 \_\_\_\_\_

Comments:

Systemwide Curriculum Committee Review

Date: \_\_\_\_\_ 1/10/2024 \_\_\_\_\_

Comments:

Director of Instruction/District Administrator's Approval: \_\_\_\_\_ 1/11/2024 \_\_\_\_\_

Board of Education Curriculum Sub-committee Review Date: \_\_\_\_\_

Board of Education Approval Date: \_\_\_\_\_

**I. COURSE INFORMATION**

A. Rationale for Course: *(Provide a brief description of student/school needs/purpose of course, benefits, and anticipated student outcomes.)*

**During the 2023-2024 academic year, Waunakee High School took an innovative step by introducing the Heritage Bilingual Biology class to newcomer/recent comer native Spanish speakers. This course, satisfying 1.0 of the 3.0 required science credits for graduation, enrolled 13 students, four of whom joined after the commencement of the school year, highlighting the demand and relevance of such offerings. The Heritage Bilingual Biology class has been instrumental in providing an equitable access to bilingual education and content learning of science, effectively bridging language barriers and fostering a more inclusive learning environment.**

**The success of the Heritage Bilingual Biology highlights the need for continued efforts to address the educational needs of newcomer and recent comer Spanish-speaking students. Recognizing the importance of bilingual education and acknowledging the diverse linguistic backgrounds of our student body, it is proposed to offer the Heritage Environmental Studies class for the 2024-2025 school year.**

**Offering the Heritage Environmental Studies class continues with the goal of providing students with the opportunity of deeper learning of scientific concepts in their native language, it promotes the use of translanguaging, and it encourages students to bridge**

into English language learning through the content of science. The Heritage Environmental Studies class aligns with the broader goal of providing an inclusive and comprehensive education to all students.

By alternating between Heritage Bilingual Biology and Heritage Bilingual Environmental Studies in subsequent years, we ensure that newcomer and recent comer native Spanish speakers have continuous access to science content in their native language. This approach allows students to accumulate 2.0 of the 3.0 required science credits for graduation through the bilingual Science program, thus contributing significantly to their academic progress and success.

The benefits of this proposal extend beyond the academic realm. By offering Heritage Environmental Studies, we are not only enriching the educational experience of our students but also fostering a more inclusive and culturally responsive educational community. Anticipated student outcomes include higher order learning of science content, increased academic achievement, a sense of belonging, and enhanced academic language proficiency in both Spanish and English.

B. Course Description: *(Short descriptive paragraph highlighting the major focus of course. To be used for course offering catalog.)*

This is an introductory course in Environmental Studies with a focus on Ecology. This class will be primarily conducted in Spanish and incorporates Spanish language through reading, writing, speaking and listening activities. It is intended for students to build their academic native language skills, learn NGSS (Next Generation Science Standards) and support academic English language development. Both classroom activities, case studies, and field study activities are used in studying the principles of Ecology. Major unit themes of this course include: The Biosphere, Ecosystems and the flow of energy, Population dynamics and behavior (how populations interact with each other and their environment), Communities and Ecosystem Dynamics, Humans and Global Change.

C. Course Outline: *(Attach course outline which includes the major topics and concepts.)*

1. Science is a process.

- Science is a method of learning more about the world.
- Science constantly changes the way we understand the world.

2. Energy conversions underlie all ecological processes.

- Energy is neither created nor destroyed.
- As energy flows through systems, at each step more of it becomes available.

3. Global systems

- The Earth itself is one interconnected system.

- climate, weather and life
- Biomes and aquatic ecosystems
- Natural systems change over time and space.
- Systems vary in ability to recover from disturbances.

#### 4. Ecosystems

- Energy, producers and consumers
- the flow of energy in ecosystems
- the cycles of matter

#### 5. Populations

- how populations grow
- limits to growth
- human population growth

#### 6. Communities and ecosystem dynamics

- habitats, niches and interactions between species
- Succession
- Biodiversity, ecosystems and resilience

#### 7. Humans and global change

- Humans alter natural systems
- ecological footprints
- causes and effects of global change
- measure and respond to change
- sustainability

D. Materials & Resources: *(Include text, computer/technology tools, and supplementary information.)*

- **SAVVAS Biology book in Spanish**
- **Gimkit account**
- **Brainpop - Spanish**
- **Quizlet**
- **[Next Generations Storylines](#)**
- **[PBS Learning Media](#)**
- **[Khan Academy en Español](#)**
- **<https://www.educ.ar/buscador?q=ecologia>**
- **<https://www.wisconsincolatinos.org/>**

E. Instructional Methods: (Check applicable ones and explain wherever necessary.)

Which of these are used: Check with "X"

X	Lectures		Demonstrations	X	Check Quizzes
X	Discussions		Term Papers		Individual Study Contracts
	Special Reports	X	Extra Reading		Other
X	Laboratory (hands-on)	X	AV Materials		
	Online/Virtual Learning	X	Field Trips		

F. Student Evaluation Procedures:

Assessment methods may include:

- Quizzes and tests
- Projects (brochure, poster)
- Lab practical formative assessments
- Labs - field survey (hands-on) - completion of written reports as well as lab / survey activity
- Other formative and summative measures

G. Financial Impact: (Provide an explanation of projected costs for personnel, materials, and equipment for subsequent years when the proposal is fully implemented.)

**Additional Spanish language SAVAAS Biology books may need to be purchased due to an increase student enrollment numbers.**

H. Financial Impact: (First Year)

<u>Added Personnel</u>	How Many	Approx. Cost	Total Cost
	Professional	_____	\$ _____
\$ _____			
	Non-Professional	_____	\$ _____
\$ _____			
	(Assistants, secretarial, etc.)		

Added Materials

Textbooks \_\_\_\_\_ @ \$ \_\_\_\_\_ =  
\$ \_\_\_\_\_

Supplies  
\$ \_\_\_\_\_

Added Equipment Needed:

List/Cost: \_\_\_\_\_ @ \$ \_\_\_\_\_ =  
\$ \_\_\_\_\_

\_\_\_\_\_ @ \$ \_\_\_\_\_ =  
\$ \_\_\_\_\_

\_\_\_\_\_ @ \$ \_\_\_\_\_ =  
\$ \_\_\_\_\_

I. Explain how this new course will correlate with Wisconsin State Academic Standards and/or district remediation plans.

[Next Generation Science Standards](#)

**HS-LS - ECOSYSTEMS - INTERACTIONS, ENERGY, & DYNAMICS**

HS-LS2-1 Use mathematical and/or computational representations to support explanations of factors that affect carrying capacity of ecosystems at different scales.

HS-LS2-2 Use mathematical representations to support and revise explanations based on evidence about factors affecting biodiversity and populations in ecosystems of different scales.

HS-LS2-3 Construct and revise an explanation based on evidence for the cycling of matter and flow of energy in aerobic and anaerobic conditions.

HS-LS2-4 Use mathematical representations to support claims for the cycling of matter and flow of energy among organisms in an ecosystem.

HS-LS2-5 Develop a model to illustrate the role of photosynthesis and cellular respiration in the cycling of carbon among the biosphere, atmosphere, hydrosphere, and geosphere.

HS-LS2-6 Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing conditions may result in a new ecosystem

HS-LS2-7 Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.

HS-LS4-5 Evaluate the evidence supporting claims that changes in environmental conditions may result in (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species.

HS-LS4-6 Create or revise a simulation to test a solution to mitigate adverse impacts of human activity on biodiversity.

### **HS-ESS - EARTH'S SYSTEMS / EARTH AND HUMAN ACTIVITY**

HS-ESS2-4 Earth's Systems: Analyze and interpret data to explore how variations in the flow of energy into and out of Earth's systems result in changes in atmosphere and climate.

HS-ESS2-6 Earth's Systems: Develop a quantitative model to describe the cycling of carbon among the hydrosphere, atmosphere, geosphere, and biosphere.

HS-ESS3-3 Human Sustainability: Create a computational simulation to illustrate the relationships among management of natural resources, the sustainability of human populations, and biodiversity.

HS-ESS3-4 Human Sustainability: Evaluate or refine a technological solution that reduces impacts of human activities on natural systems.

HS-ESS3-5 Analyze geoscience data and the results from global climate models to make an evidence-based forecast of the current rate of global or regional climate change and associated future impacts to Earth's systems.

HS-ESS3-6 Human Sustainability: Use a computational representation to illustrate the relationships among Earth systems and how those relationships are being modified due to human activity.

### **HS-ETS - ENGINEERING DESIGN**

HS-ETS1-1 - Analyze a major global challenge to specify qualitative and quantitative criteria and constraints for solutions that account for societal needs and wants.

HS-ETS1-2 - Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.

HS-ETS1-3 - Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics as well as possible social, cultural, and environmental impacts.

HS-ETS1-4 - Use a computer simulation to model the impact of proposed solutions to a complex real-world problem with numerous criteria and constraints on interactions within and between systems relevant to the problem.

**II. OTHER PERTINENT INFORMATION**

A. This course will be: *(please check one)*

- an addition to the department's offering  
 a replacement for \_\_\_\_\_  
 a pilot study

B. This course will require *(please check the appropriate spaces):*

- the adoption of a new textbook  
 the use of a text previously adopted and in use

C. This course will require *(please check appropriate spaces)*

- specialized organization of teacher time  
 specialized room arrangement or equipment *(explain below)*  
 specialized student grouping or sectioning  
 curriculum planning time **(Summer curriculum hours)**  
 specialized technology

D. To what extent will this curriculum change affect the number of teacher preparation each semester? *(Explain)*

E. To what extent does this course conflict with the content and/or student availability of other courses in your department?

**No conflict**

F. To what extent does this course conflict with courses offered in other departments?

**No conflict**

G. What course(s) could be deleted if this curriculum change is adopted?

H. This proposed course must be discussed with other members of your department prior to submitting this form. *(Describe briefly the outcome of these discussions.)*

**Discussions regarding the proposed course have taken place with key stakeholders, including Administration, the ELL/Bilingual Department, and the CESA 2 Dual Language Development Consultant. Throughout these discussions, we focused on the course rationale, outline, and the logistical aspects of offering Heritage Bilingual Environmental Studies and Heritage Bilingual Biology on alternating years. This strategic approach aims to enhance our high school bilingual programming by offering students the opportunity to fulfill 2.0 of the required 3.0 science credits for graduation.**

**Engaging in these conversations has allowed us to address the specific needs of our EL newcomer/recent comer Spanish-speaking students. By incorporating this dual-science content approach, we are better positioned to provide a comprehensive bilingual education experience.**

I. To what effect does this curriculum change affect the K-12 Skills Continuum? *(duplication, deletion, reinforcement, etc.)*

J. If approved, this course will begin: \_\_\_\_\_  
*(semester/year)*

Rev. 8/15/2018