RSU 24 Course Development/Change Request

This form and process is used for adding courses. Please submit to the Curriculum Director. The request will be reviewed by the Educational Programming Committee in a 2-step process. An example is available.

Person/Team Making Request: Julie Burr, Alisa Long, Morgan Forni

Content Area: Science

Course Title: Eastern Maine Skippers Program

Purpose of the Course: Eastern Maine Skippers Program (EMSP) is a regional program that has been implemented into many schools throughout Downeast Maine. A central feature of EMSP is a year-long project in which students work collaboratively with community members like scientists, fishermen, regulators and industry professionals, to investigate serious challenges within the fishing industry, to research, develop and present effective solutions. This will be a project-based class that is open to 10th-12th grade students who have successfully completed physical science.

Course Objectives: Please be specific in how these objectives relate to RSU 24's Essential Skills and Power Standards as well as how they will be assessed.

Standards covered will vary based upon the guiding question for the project each year. For example, this years guiding question is, "How do we use technology to contribute to effective and sustainable fishing practices?". A variety of content, science and engineering, as well as career ed. standards can be met through participation in this course.

Science and Technology Standards

Science and Engineering Practices:
Ask and/or evaluate questions that challenge the premise(s) of an argument, the interpretation of a data set, or the suitability of a design (NGSS.SEP.I.1)

Ask questions that can be investigated within the scope of the school laboratory, research facilities, or field (e.g., outdoor environment) with available resources and, when appropriate, frame a hypothesis on a model or theory. (NGSS.SEP.I.2)

Develop, revise, and/or use a model based on evidence to illustrate and/or predict the relationships between systems or between components of a system. (NGSS.SEP.M.1)

Develop a complex model that allows for manipulation and testing of a proposed process or system. (NGSS.SEP.M.2)

Make Hypotheses that specify what happens to a dependent variable when an independent variable is manipulated (NGSS.SEP.ED.1)

Plan an investigation or test a design individually and collaboratively to produce data to serve as the basis for evidence as part of building and revising models, supporting explanations for phenomena, or testing solutions to problems. Consider possible confounding variables or effects and evaluate the investigation's design to ensure variables are controlled. (NGSS.SEP.ED.2)

Analyze data using tools, technologies, and/or models (e.g. computational, mathematical) in order to make valid and reliable scientific claims or determine an optimal design solution (NGSS.SEP.D.1)

Consider limitations of data analysis (e.g., measurement error, sample selection) when analyzing and interpreting data.

(NGSS.SEP.D.2)

Apply ratios, rates, percentages, and unit conversions in the context of complicated measurement problems involving quantities with derived or compound units (such as mg/mL, kg/m^3, acre-feet, etc.). (NGSS.SEP.C.1)

Use mathematical, computational, and/or algorithmic representations of phenomena or design solutions to describe and/or support and/or explanations. (NGSS.SEP.C.2)

Make a quantitative and/or qualitative claim regarding the relationship between dependent and independent variables. (NGSS.SEP.SS.1)

Apply scientific reasoning, theory, and/or models to link evidence to the claims to assess the extent to which the reasoning and data support the explanation or conclusion. (NGSS.SEP.SS.2)

Construct, use, and/or present an oral and/or written argument or counter-arguments based on data and evidence. (NGSS.SEP.SC.1)

Evaluate the claims, evidence, and/or reasoning behind currently accepted explanations or solutions to determine the merits of arguments. (NGSS.SEP.SC.2)

Communicate scientific and/or technical information or ideas (e.g. about phenomena and/or the process of development and the design and performance of a proposed process or system) in multiple formats (i.e., orally, graphically, textually, and mathematically). (NGSS.SEP.SR.1)

Critically read scientific literature adapted for classroom use to determine the central ideas or conclusions and/or to obtain scientific and/or technical information to summarize complex evidence, concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms. (NGSS.SEP.SR.2)

Technical Reading and Writing:
Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain. (CCSS.ELA.RL.11-12.1)

Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which the student is writing. (CCSS.ELA.W.11-12.1.D)

Provide a concluding statement or section that follows from and supports the information or explanation presented. (CCSS.ELA.WHST.11-12.2.F)

Develop the topic thoroughly by selecting the most significant and relevant facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic. (CCSS.ELA.WHST.11-12.2.B)

Please attach a proposed budget.
This course will require budget for transportation for 10 local field trips and one trip to the Fisherman Forum in Augusta, Maine. Cost for a substitute will also need to be included for field trip days and EMSP Teacher Workshops. This course will also require $600 for supplies depending upon the guided question for the project.

How does this change affect the teaching schedule?
This will take the place of a science elective course. Science elective courses change with student interest from year to year. There is a cohort of students who are interested in pursuing this type of class within their schedule.

Other Additional Information:
This course will cover a similar assortment of standards as Environmental Science. This will be an option for kids who have an interest in fishing and Marine trades who are not necessarily a part of the Marine Pathways Program.

Signatures: Teacher(s): _____ Date: 1/23/19

_____ Date: 1/23/19

_____ Date: 1/23/19

Building Principal: _____ Date: 2/1/19

Curriculum Director: _____ Date: _____

First Review by the Educational Programming Committee on _____

Recommendation to RSU 24 Board of Directors:

RSU 24 Board of Directors' Decision:
Date: