MHS COURSE PROPOSAL FORM

Part I: General Information

Title of New Course:	Exploring Computer Science A & B

Proposed by:	E. Briley	**Department:**	**CS will be a CTE course**

Trimester Length: 1 2 3	**Are you proposing that this course have a weighted grade? If so, please provide rationale below.**	**Yes**		**No X**	
Rationale for weighted grade (if applicable)					

What grade level(s) is the course intended to target?	9-12

Does it replace an existing course?	**Yes**		**No**	**X**

If yes, what course?	

Does it change department/graduation requirements?	**Yes**		**No**	**x**

If yes, explain:	

Are there any prerequisites?	**Yes**		**No**	x

If yes, what?	

Part II - Budget: Estimated Costs

Please estimate any projected costs related to this course. In addition, please indicate if this is a one-time start-up expense or an annual expense (textbook adoption is considered a startup expense) by placing an "X" in the appropriate column.

Area/Item	Brief Description	Start Up Expense?	Annual Expense?	Total Cost
Additional FTE	0.13			
Curriculum Writing	Free ECS Curriculum	$0.00	$0.00	$0.00
Staff Development	NSF Funded PD	$0.00	$0.00	$0.00
Textbooks	Not Applicable	$0.00	$0.00	$0.00
Other instructional Materials	10 Edison Robots	$400	$200	$600
Technology Needs	Use Engineering Lab	$0.00	Normal Maintenance	

Additional Expenses	Office Supplies	$100	$100	$200

Part III - Course Details

Course Description (to be used in the Curriculum Guide, please limit to 100 words):

Computer Science is changing everything. Entertainment, medicine, transportation, communication, public policy, agriculture, fashion, art, energy, society, and design all rely on computer science. Be part of that change, and have fun doing it! This class is for everyone - no experience needed. Sign up with a friend! There are lots of opportunities to learn together.

Make web pages, design your own program, design and control devices, learn what artificial intelligence is and why you care, understand how data is captured and used, learn how technology influences your life experience, investigate how technology impacts society, and create your own new technologies instead of being consumed by others' creations.

Rationale for proposing the course (What data/information do you have to support the request?)

With grants from the National Science Foundation, ECS was developed at UCLA and University of Oregon. Exploring Computer Science (ECS) is a K-12/University national program committed to increasing learning opportunities at the high school level for all students, with a specific focus on access for traditionally underrepresented students. The ECS program consists of a high school introductory computer science (CS) course combined with a teacher professional development program. ECS was developed in response to previous research, detailed in *Stuck in the Shallow End* (Margolis et al., 2008), that identified disparities in CS learning opportunities that fall along race and socioeconomic lines.

Student Learning Outcomes:

The ECS curriculum consists of six units of approximately six weeks each, although as a two-trimester course, it may be limited to the first four units, covering Human Computer Interaction, Problem Solving, Web Design, Introduction to Programming, Computing and Data Analysis, and Robotics. There are also the optional units E-Textiles, and Artificial Intelligence. The ECS curriculum is structured to facilitate inquiry and equity-based instructional practices so that all students, especially those in schools with high numbers of low-income students and students of color, are introduced to the problem solving, computational practices, and modes of inquiry associated with computer science.

Oregon, National and/or other standards addressed in this course:

The ODE Course 10012 Exploring Computer Science course presents students with the conceptual underpinnings of computer science through an exploration of human computer interaction, web design, computer programming, data modeling, and robotics. While such courses include programming, the focus is on the computational practices associated with doing computer science, rather than just a narrow focus on coding, syntax, or tools. Exploring Computer Science courses teaches students the computational practices of algorithm design, problem solving, and programming within a context that is relevant to their lives. The curriculum aligns well with college preparation coursework as well as Career and Technical Education (CTE) pathways including: Information Technology; Engineering and Design; and Arts, Media and Entertainment Technology, among others.

Any additional information and/or comments:
Teacher professional development and curriculum support is provided through the CS for Oregon National Science Foundation grant.

Part IV - Approvals

Department Approval:

Yes, we support this proposal YES	No, we do not support this proposal (provide rationale below)	Department Chair Signature(s)	Date 2/25/2020

3/2/2020

Site Council:

X			3/3/2020
Yes, we support this proposal	No, we do not support this proposal (provide rationale below)	Site Council Chairperson Signature	Date

Building Administrator:

✓			3/3/2020
Yes, I support this proposal	No, we do not support this proposal (provide rationale below)	Principal Signature	Date

Rationale for Lack of Support:

Revised 8/29/2018