



MONROE PUBLIC SCHOOLS
— MONROE, CONNECTICUT —

WEDNESDAY, SEPTEMBER 10, 2014
MASUK HIGH SCHOOL
LIBRARY/MEDIA CENTER
1014 MONROE TURNPIKE
MONROE, CONNECTICUT 06468

CURRICULUM COUNCIL
AGENDA

4:00 P.M.

OLD BUSINESS

- I. APPROVAL OF THE MINUTES FROM THE MAY 7, 2014 MEETING

NEW BUSINESS

- I. AP PHYSICS 2/UT – JIM STOELZEL/PETER SCHMITT
- II. FORENSICS II – JIM STOELZEL
- III. HORTICULTURE A & B – PETER LOPUCH/MARK SCHWARZ
- IV. GRADUATION REQUIREMENTS - JOE KOBZA
- V. K-5 MATH COMMITTEE – CINDY BROOKER



Monroe Board of Education
Curriculum Council Committee
May 7, 2014
4:00 PM
Masuk High School

Meeting Minutes

The meeting was called to order at 4:00 p.m. by Sheila Casinelli, Curriculum Council Co-Chair.

Those in attendance included: Jim Agostine, John Battista, Sheila Casinelli, Jack Zamary, Joe Kobza, Jack Ceccolini, Debbie Kovachi, Bruce Lazar, Lisa Peznowski, Michael Crowley, Kevin Welch, Ian Lowell, Jim Stoelzel, Susan Russell, Jamie Sherry, Laura Lawlor, Sean Serafino, Elisa Rubis, Kelly Sherry, Brooke Burling, and Jennifer Unger.

Old Business

I. *Approval of March 5, 2014 Minutes*

Motion: Jim Agostine

Motion to approve minutes from the March 5, 2014 Curriculum Council meeting.

Second: Laura Lawlor

Vote: Unanimous

Note ~ there was no April 2014 meeting this year.

New Business

PRESENTATION

I. TEACHERS COLLEGE UPDATE – SHEILA CASINELLI AND MIKE CROWLEY

Sheila Casinelli, Director of Instruction, and Mike Crowley, Secondary Instructional Leader for English Language Arts, shared an update on Monroe's work with Teachers College (TC) this year. The PowerPoint will be shared with the BOE on Monday, May 19. In the presentation, a history of the work with Writer's Workshop was shared along with what has transpired this past year. Bringing in Professional Development Consultants/Staff Developers to work with our students and teachers has been incredibly powerful. Having our staff go to TC for other professional development workshops has also been helpful as we make the change to our writing curriculum to align it to the CCSS. Our plan is to continue this work into next school year as well.

PROPOSAL

I. K-12 LIBRARY CURRICULUM

Jack Zamary, Director of Technology, along with our Library Media Specialists/staff (Meghan Letko/MHS, Jan Birney/JH, Mary Rauner/FH, Johanna George/ME, Jeanne Moore/SE) illustrated the work done this past year to align the Library Curriculum to standards. Prior to this work, we did not have a formal library curriculum. Recently, the American Association of School Library (AASL) Standards were integrated with the CCSS. This new curriculum makes important connections to both of those standards sets as well as technology standards from the International Society for Technology Education

(ISTE). Advisement was given by the Secondary Instructional Leaders for ELA, History and Science as well as the elementary coordinator for ELA. Existing schedules will need to be revised in order to deliver this curriculum. A quote from the Chicago Tribune sums up the need for this work, "The role of librarians is being re-branded to reflect their expertise as content curators and trusted navigators in an ever-expanding ocean of information - in whatever format it may exist." This curriculum uses information technology meaningfully to prepare students for success within and beyond our schools.

Motion: Ian Lowell

Motion to endorse the 3-D Printing Course.

Second: Mike Crowley

Vote: Unanimous

Sheila Casinelli, Director of Instruction, thanked the group for their work with the committee this year noting its importance in reviewing and recommending curriculum to the BOE for approval. Work of the committee in the fall is to approve classes and changes in curriculum for the following year so that they can be added to budget conversations. Presentations in the spring give the committee an update on work done throughout the year. If people have items they would like to learn more about, they are asked to email Sheila so she can add them to the list of agenda items for next year. Our meetings for the 2014-2015 school year will continue to be on the first Wednesday of the month. Meeting dates for next year will be sent out once they are established.

The meeting adjourned at 4:42 pm.

**MONROE CURRICULUM COUNCIL
MONROE BOARD OF EDUCATION**

Monroe, Connecticut

Curriculum Proposal Form

Course Title	AP Physics 2/UCT		
Subject Area	Science	Grade Span	11-12
Proposal Author(s)	Jim Stoelzel/Peter Schmitt	Date	08/01/14
Course of Study	New	xx	Revised
	Semester		Full Year
			xx

Respond to the following questions as they apply to your proposal.

Part A: Course Information

Rationale for Requested Curriculum Work

This course replaces 6850 AP Physics B and 6830 Physics II (Honors) with a second-year Advanced Placement course that also meets the requirements for the UCONN Early College Experience credit, allowing our students greater opportunity to earn college credits while at Masuk.

Provide a narrative description of the course.

AP Physics 2/UCT is the equivalent to a second-semester college course in algebra-based physics. The course covers fluid mechanics; thermodynamics; electricity and magnetism; optics; atomic and nuclear physics. The pace and workload of this course is rigorous. This course has been designed to prepare students for the AP Physics 2 Exam and the UCONN 1202 final exam. Students who satisfactorily complete this course may receive up to 4 college credits issued by the University of Connecticut for their Physics 1202 course and AP credit for a first-semester calculus-based physics course.

Describe any prerequisites for taking this course and how this course fits in a sequence.

A strong background in mathematics is required, especially as as related to algebra, trigonometry, and geometry. Prerequisites: B or higher in AP Physics I and 5410 (AP Calculus AB/UCT) or 5450 (AP Calculus BC) either of which may be taken concurrently.

If this is a revision to a course, what data (quantitative/qualitative) contributed to the need for a revision?

Current enrollment in AP Physics 2 = 30 expected to be approximate enrollment for AP Physics 2/UCT

Can the existing school facility/schedule accommodate this change? Require any additional staffing?

No change to facility or staffing

In developing this course, please cite the research and sources consulted in designing this proposal.

AP website - Advances in AP <http://advancesinap.collegeboard.org/node/3683>
 UCONN ECE site for PHYS 1202 course description
<http://ece.uconn.edu/courses/subj/phys.php>

Part B: How does your Curriculum Proposal meet the Curriculum Philosophy of the district?

Our curriculum supports the Monroe Public Schools mission by ensuring that instruction is engaging, rigorous, relevant, and inquiry based while meeting the needs of the 21st century learner. All students, upon graduation, will be college and career ready, prepared to succeed in a diverse global community.

Provide evidence for each of the following:

Rigorous

This course adds an opportunity for Masuk students to earn college-level Science credit during their junior or senior year. Students use a college-level textbook to investigate topics in Physics requiring advanced problem-solving and mathematical skills.

Relevant

Recent changes to the AP Science courses reflect greater emphasis on connection to real-world applications of the Physics concepts studied.

Inquiry based

College Board strongly recommends the Physics 2 course include a hands-on laboratory component comparable to introductory college-level physics laboratories, with a minimum of 10 student-conducted laboratory investigations representing a variety of topics covered in the course. Each student should complete a lab notebook or portfolio of lab reports.

Meeting the needs of the 21st century learner

This curriculum meets the needs of the 21st century learner by requiring students to be creative thinkers who can effectively communicate and collaborate with one another. Each unit incorporate the use of technology for analysis and evaluation of solutions.

Preparing students to be college and career ready

This course will be conducted at a college-level, with significant inputs from the University of Connecticut to ensure this fidelity to the college experience. This course directly supports a number of college majors in science, engineering, math, and other areas of study.

Part C: Curriculum Writing

If this proposal is approved, you will be expected to map the units of study that will be covered in this course of study.

Recommended Hours	Requested Hours
New Course – Semester approximately 20 hours Year Course approximately 40 hours Revision – Semester approximately 15 hours Year Course approximately 20 hours	Total Hours: 40 hours

Part D: Professional Development

Please describe any professional development activities needed to implement this curriculum. Do not count curriculum writing in this section.

Activity	Requested Hours
1-week AP Physics 2 course at Taft for 1 Physics teacher	\$1000

Part E: Approval (Signatures required)

I have reviewed this course proposal and I am requesting approval by the Monroe Board of Education.

Title	Signature	Date
Recommended by:	Peter Schmitt	8/01/14
Department Chair:	Jim Stoelzel	8/01/14
Principal/Director:	Joe Kobza	8/01/14
Director of Instruction:	Sheila Casinelli	8/01/14
Assistant Superintendent:	John Battista	8/01/14
Superintendent:		
Board of Education		

**MONROE CURRICULUM COUNCIL
MONROE BOARD OF EDUCATION**

Monroe, Connecticut

Instructional Materials/Textbook Proposal Form

Course Title	AP Physics 2/UCT		
Subject Area	Science	Grade Span	11-12
Proposal Author(s)	Jim Stoelzel/Peter Schmitt	Date	8/01/14
Course of Study	New	xx	Revised
	Semester		Full Year
			xx

Respond to the following questions as they apply to your proposal.

Part A: Textbook Proposal

Textbook Title:	College Physics. Boston, MA: C. (9th ed, 2011) \$154		
Author/Editor:	Serway, R. A., Faugh, J. and Vuielle, C.	Copyright Date:	2003 (6th ed)
Publisher:	Cengage Wodsworth	Latest Revision Date:	2011 (9th ed)
Recommended for use in grade(s)	12	High/Avg/Low level:	High
Subject	Science		
Course Title:	AP Physics 2/UCT		

Part B: Textbook Information

Rationale for Requested Textbook

We currently have enough copies of the 4th edition to run the course with expected enrollment. This text is on the AP Physics 2 approved text list. Additional copies as needed will be purchased from existing budget.

Why is this textbook needed? Include an explanation of how the text relates to the proposed course of study?

No new text planned for purchase.

Identify other textbooks that were considered, and include the publishers/copyright.

Cutnell, John D. and Kenneth Johnson. Physics. Hoboken, NJ: Wiley. (9th ed, 2012) \$212
 Giambalista, A., Richardson, B. and Richardson, R.C. College Physics. Boston, MA: McGraw-Hill. (2012) \$151
 Giancoli, D.C. Physics: Principles with Applications. Englewood Cliffs, NJ: Prentice Hall. (7th ed, 2012) \$219
 Knight, R. College Physics: A Strategic Approach. Boston, MA: Addison-Wesley/Pearson. (2nd ed, 2012) \$197
 ** Serway, R. A., Faugh, J. and Vuille, C. College Physics. Boston, MA: Cengage Wodsworth. (9th ed, 2011) \$154
 Walker, J.S. Physics. Volumes 1 and 2. Upper Saddle River, NJ: Prentice Hall. (4th ed, 2009) \$192
 Wilson, J. and Buffa, A. College Physics. San Francisco, CA: Addison-Wesley. (7th ed, 2009) \$212 if older edition replaced

Why was the recommended textbook chosen?

Excellent range of problems, teacher familiarity with this text, minimize cost by using 6th edition (2003)

Part C: Funding

Funding for this course should be included in the budget for the implementation year. Failure to include the funding may result in a delay in implementation. Courses added to program of studies booklets prior to approval by the Board of Education should include "pending BOE approval" alongside the course title.

Budget Request:

Item	Quantity	Unit Price	Extended Price
Textbooks			0
Workbooks			0
Software/Online textbook			0
Equipment/Hardware*			0
Other supplies			1000
		Total	0

*Describe Equipment/Hardware

Several AP-required labs will require purchase of additional materials (variable-volt power supplies, wave generator)

Part D: Approval (Signatures required)

I have reviewed this course proposal and I am requesting approval by the Monroe Board of Education.

Title	Signature	Date
Recommended by:	Peter Schmitt	8/01/14
Department Chair:	Jim Stoelzel	8/01/14
Principal/Director:	Joe Kobza	8/01/14
Director of Instruction:	Sheila Casinelli	8/01/14
Assistant Superintendent:	John Battista	8/01/14
Superintendent:		
Board of Education		

Current Exams

Emphasis on questions that require only mathematical routines used for solution.

- **70 multiple-choice questions | 90 minutes**
 - discrete items & items in sets
 - 5 answer choices, each question
- **6-7 free-response questions | 90 minutes**
 - 1 laboratory-related question
 - questions of varying length

Redesigned Exams (Spring 2015)

Students continue to solve problems mathematically but the use of proportional and symbolic reasoning and ability to translate between multiple representations will be emphasized.

- Physics 1 and 2 Exams**
 - **50 multiple-choice questions | 90 minutes**
 - 45 discrete items & items in sets
 - 5 multiple-correct items
 - 4 answer choices, each question
 - Physics 1**
 - **5 free-response questions | 90 minutes**
 - 1 experimental design question
 - 1 qualitative/quantitative translation
 - 3 short-answer questions
 - Physics 2**
 - **4 free-response questions | 90 minutes**
 - 1 experimental design question
 - 1 qualitative/quantitative translation
 - 2 short-answer questions

Current Course Structure

Content Outline includes a checklist of topics to cover.

Content Outline for Physics B and Physics C

A more detailed topic outline is contained in the "Learning Objectives for AP Physics," which follow this outline.

Content Area	Percentage Goals for Exams	
	Physics B	Physics C: Mechanics
I. Newtonian Mechanics	35%	100%
A. Kinematics (including vectors, vector algebra, components of vectors, coordinate systems, displacement, velocity, and acceleration)	7%	18%
1. Motion in one dimension	✓	✓
2. Motion in two dimensions, including projectile motion	✓	✓
B. Newton's laws of motion	9%	20%
1. Static equilibrium (first law)	✓	✓
2. Dynamics of a single particle (second law)	✓	✓
3. Systems of two or more objects (third law)	✓	✓
C. Work, energy, power	5%	14%
1. Work and work-energy theorem	✓	✓
2. Forces and potential energy	✓	✓
3. Conservation of energy	✓	✓
4. Power	✓	✓
D. Systems of particles, linear momentum	4%	12%
1. Center of mass	✓	✓
2. Impulse and momentum	✓	✓
3. Conservation of linear momentum, collisions	✓	✓
E. Circular motion and rotation	4%	18%
1. Uniform circular motion	✓	✓
2. Torque and rotational statics	✓	✓
3. Rotational kinematics and dynamics	✓	✓
4. Angular momentum and its conservation	✓	✓

Structure for New Courses (Fall 2014)

Curriculum Framework is structured around 7 Big Ideas that articulate the foundational principles in introductory physics.

Big Idea 1: Objects and systems have properties such as mass and charge. Systems may have internal structure.

Big Idea 2: Fields existing in space can be used to explain interactions.

Big Idea 3: The interactions of an object with other objects can be described by forces.

Big Idea 4: Interactions between systems can result in changes in those systems.

Big Idea 5: Changes that occur as a result of interactions are constrained by conservation laws.

Big Idea 6: Waves can transfer energy and momentum from one location to another without the permanent transfer of mass and serve as a mathematical model for the description of other phenomena.

Big Idea 7: The mathematics of probability can be used to describe the behavior of complex systems and to interpret the behavior of quantum mechanical systems.

Current Course Content

AP Physics B includes a wide breadth of topics to be covered in a single year.

- kinematics;
- Newton's laws of motion;
- torque;
- gravitation and circular motion; work, energy, and power;
- linear momentum;
- oscillations;
- mechanical waves and sound;
- fluid statics and dynamics;
- thermodynamics with kinetic theory, PV diagrams; electrostatics;
- electrical circuits;
- magnetic fields;
- electromagnetism;
- physical and geometric optics;
- topics in modern physics

Content for New Courses (Fall 2014)

The new courses decrease breadth of content to allow time to promote conceptual reasoning and understanding.

AP Physics 1

- kinematics
- Newton's laws of motion;
- torque;
- rotational motion and angular momentum*;
- gravitation and circular motion;
- work, energy, and power;
- linear momentum;
- oscillations, mechanical waves and sound;
- introduction to electric circuits

AP Physics 2

- fluid statics and dynamics;
- thermodynamics with kinetic theory, PV diagrams and probability;
- electrostatics;
- electrical circuits;
- magnetic fields;
- electromagnetism;
- physical and geometric optics;
- topics in modern physics

**MONROE CURRICULUM COUNCIL
MONROE BOARD OF EDUCATION**

Monroe, Connecticut

Curriculum Proposal Form

Course Title	Forensics II		
Subject Area	Science	Grade Span	11-12
Proposal Author(s)	J. Stoelzel	Date	09/02/2014
Course of Study	New	x	Revised
	Semester	x	Full Year

Respond to the following questions as they apply to your proposal.

Part A: Course Information

Rationale for Requested Curriculum Work

Forensics I has been a very popular addition to the Science Course catalog, with quite a few students requesting a second semester devoted to more advanced topics in forensics. A follow-on course would better prepare students considering careers in law enforcement, criminal justice, analytic science, etc. for further studies in college.

Provide a narrative description of the course.

Forensics II is a half-year elective course that goes beyond the introduction to the topics of criminology within the field of forensic science. Study includes the applications of concepts from the areas of biology, chemistry, physics and geology to analyze and investigate evidence that may be discovered in a criminal investigation, with more opportunity for mathematical modeling, greater reading and writing expectations than are required in Forensics I. Classroom activities include experiments, projects, case studies and the incorporation of technology.

Describe any prerequisites for taking this course and how this course fits in a sequence.

Passing grade in Forensics I (not taken concurrently) and Algebra I

If this is a revision to a course, what data (quantitative/qualitative) contributed to the need for a revision?

Can the existing school facility/schedule accommodate this change? Require any additional staffing?

Yes, this course could be run in any Masuk Science classroom. No additional staffing required unless overall enrollment in all science courses increases.

In developing this course, please cite the research and sources consulted in designing this proposal.

Discussed course implementation at several area districts to help understand course sequencing, prerequisites, and materials used in effective inquiry-based forensics labs.

Part B: How does your Curriculum Proposal meet the Curriculum Philosophy of the district?

Our curriculum supports the Monroe Public Schools mission by ensuring that instruction is engaging, rigorous, relevant, and inquiry based while meeting the needs of the 21st century learner. All students, upon graduation, will be college and career ready, prepared to succeed in a diverse global community.

Provide evidence for each of the following:

Rigorous

This course builds off prior learning in Forensics I, with greater emphasis on deductive reasoning, analytic skills and higher order thinking

Relevant

Extremely popular television shows that students connect with provide an excellent way to apply real-world lab and analysis techniques that are engaging to students

Inquiry based

Each unit involves 2 or 3 hands-on activities, many of them are inquiry-based connections to abstract ideas presented in the unit. Eg. blood spatter analysis requires no math to complete, but opens the door to discussions on trig functions, vectors, scientific method, deductive reasoning, etc.

Meeting the needs of the 21st century learner

Most lab activities involve teamwork, computer-based research, analysis with graphing software, communication of ideas electronically

Preparing students to be college and career ready

Higher-order thinking throughout the course, especially applying concepts previously learned in Biology, Physical Science, and Chemistry

Part C: Curriculum Writing

If this proposal is approved, you will be expected to map the units of study that will be covered in this course of study.

Recommended Hours	Requested Hours
New Course – Semester approximately 20 hours Year Course approximately 40 hours Revision – Semester approximately 15 hours Year Course approximately 20 hours	Total Hours: 20 hours

Part D: Professional Development

Please describe any professional development activities needed to implement this curriculum. Do not count curriculum writing in this section.

Activity	Requested Hours
None	

Part E: Approval (Signatures required)

I have reviewed this course proposal and I am requesting approval by the Monroe Board of Education.

Title	Signature	Date
Recommended by:	Jim Stoelzel	09/02/14
Department Chair:	Jim Stoelzel	09/02/14
Principal/Director:	Joe Kobza	09/02/14
Director of Instruction:	Sheila Casinelli	09/02/14
Assistant Superintendent:	John Battista	09/02/14
Superintendent:		
Board of Education		

MONROE CURRICULUM COUNCIL
MONROE BOARD OF EDUCATION
 Monroe, Connecticut

Instructional Materials/Textbook Proposal Form

Course Title	Forensics II		
Subject Area	Science	Grade Span	11-12
Proposal Author(s)	J. Stoelzel	Date	9/02/14
Course of Study	New	x	Revised
	Semester	x	Full Year

Respond to the following questions as they apply to your proposal.

Part A: Textbook Proposal

Textbook Title:	Forensic Science: Fundamentals and Investigations		
Author/Editor:	Anthony J. Bertino	Copyright Date:	2012
Publisher:	South-Western Cengage Learning	Latest Revision Date:	2012
Recommended for use in grade(s)	11-12	High/Avg/Low level:	Avg
Subject	Science		
Course Title:	Forensics		

Part B: Textbook Information

Rationale for Requested Textbook

The published claims that this text engages students in active learning and emphasizes the application of integrated science in your course. Student materials combine math, chemistry, biology, physics, and earth science with content correlated to the National Science Education Standards, clearly identified by icons. This book balances extensive scientific concepts with hands-on classroom and lab activities, readings, intriguing case studies, and chapter-opening scenarios.

Why is this textbook needed? Include an explanation of how the text relates to the proposed course of study?

Text contains lab activities, case studies, and outstanding graphics that directly support course objectives and aligns best with district's mission statement.

Identify other textbooks that were considered, and include the publishers/copyright.

- 1) Forensic Science for High School Students by John Funkhouser (Kendall Hunt Publishing 2005)
- 2) Criminalistics: An Introduction to Forensic Science by Richard Saferstein (8th Ed., Prentice Hall 2004)

Why was the recommended textbook chosen?

- #1 is similar to text selected but less support materials available
- #2 is dated and requires separate (expensive) lab manual
- Selected text has most colorful, interesting material presented in excellent units, with virtual labs available

Part C: Funding

Funding for this course should be included in the budget for the implementation year. Failure to include the funding may result in a delay in implementation. Courses added to program of studies booklets prior to approval by the Board of Education should include "pending BOE approval" alongside the course title.

Budget Request:

Item	Quantity	Unit Price	Extended Price
Textbooks	30	85	2550
Workbooks			
Software/Online textbook			
Equipment/Hardware*			
Other supplies	1	500	500
Total			\$3050

*Describe Equipment/Hardware

Other supplies: Vandalia's Lyle & Louise investigation kits already purchased for Forensics I; annual restocking of consumables will be needed (approx \$500/yr)

Part D: Approval (Signatures required)

I have reviewed this course proposal and I am requesting approval by the Monroe Board of Education.

Title	Signature	Date
Recommended by:	J. Stoelzel	9/02/14
Department Chair:	J. Stoelzel	9/02/14
Principal/Director:	J. Kobza	09/02/14
Director of Instruction:	S. Casinelli	09/02/14
Assistant Superintendent:	J. Battista	09/02/14
Superintendent:		
Board of Education		

**MONROE CURRICULUM COUNCIL
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Monroe, Connecticut

Curriculum Proposal Form

Course Title	Horticulture A & B (Fall and Spring)		
Subject Area	Science	Grade Span	9-12
Proposal Author(s)	P. Lopuch, M. Schwarz	Date	September 2014
Course of Study	New	x	Revised
	Semester	x (Fall and Spring)	Full Year

Respond to the following questions as they apply to your proposal.

Part A: Course Information

Rationale for Requested Curriculum Work

Students at MHS have demonstrated an interest in the science of horticulture since the greenhouse and garden have been established in 2009. There is no specific class dealing with this topic - although there have proven to be numerous interdisciplinary applications (especially in Culinary Arts, Technology Education, Art, Ecology, and Special Education.)

Provide a narrative description of the course.

Horticulture is the science of cultivating both decorative plants and food crops. The course would investigate the science and business associated with the growth of plants. Horticulture would delve into topics such as climate, soil chemistry, geography, business, marketing, farming economy, sales, etc. This course is recommended to be broken into two half year portions: Fall and Spring. There are different growing seasons and horticulture topics and techniques that are separately covered in these similar courses.

Describe any prerequisites for taking this course and how this course fits in a sequence.

Pre requisite: (No specific course pre-req's) ... an interest in the topic, and a willingness to work both in the classroom and in the outdoor lab areas of the greenhouse and garden. Horticulture will be designed as an elective course offering in the Science Dept.

If this is a revision to a course, what data (quantitative/qualitative) contributed to the need for a revision?

Can the existing school facility/schedule accommodate this change? Require any additional staffing?

Initial investigations are underway to see what would be required to change the existing propane heater in the MHS greenhouse to a natural gas heater. No schedule changes. Staffing needs dependant upon enrollment.

In developing this course, please cite the research and sources consulted in designing this proposal.

Investigation of other high schools running similar horticulture programs have proven to be in demand and effective.

Part B: How does your Curriculum Proposal meet the Curriculum Philosophy of the district?

Our curriculum supports the Monroe Public Schools mission by ensuring that instruction is engaging, rigorous, relevant, and inquiry based while meeting the needs of the 21st century learner. All students, upon graduation, will be college and career ready, prepared to succeed in a diverse global community.

Provide evidence for each of the following:

Rigorous

Horticulture will require significant classroom work as well as additional field work. Aside from the science involved in the growth of plants, students will investigate the business side of agriculture.

Relevant

The cultivation of plants is relevant to all individuals - this essential learning is easily transferable to real-life context. All people can relate to and can benefit from an understanding of plant growth and the agricultural business. Also, as world population is growing at a nearly exponential pace, the need to grow food more efficiently will increase.

Inquiry based

The MHS greenhouse and garden are resources that lend themselves to inquiry-based learning experiences because this class would require 'hands-on' instruction and learning as well as group work in and out of the regular classroom.

Meeting the needs of the 21st century learner

Modern techniques of horticulture can be applied in this class. For example, hydroponics is one of many modern approaches to farming that could be investigated in this type of course. (As well as modern genetics/GMOs, fertilization, temperature control, crop rotation, pest control, etc.) Also, horticulture is a growing multi-billion dollar industry

Preparing students to be college and career ready

Assessments in this class will require students to employ academic skills and hands-on skills similar to skills required for success in college and in careers.

Part C: Curriculum Writing

If this proposal is approved, you will be expected to map the units of study that will be covered in this course of study.

Recommended Hours	Requested Hours
New Course – Semester approximately 20 hours Year Course approximately 40 hours Revision – Semester approximately 15 hours Year Course approximately 20 hours	Total Hours: 40 hours (20 A - 20 B)

Part D: Professional Development

Please describe any professional development activities needed to implement this curriculum. Do not count curriculum writing in this section.

Activity	Requested Hours
visitation of schools with similar horticulture programs	(2-3 days)

Part E: Approval (Signatures required)

I have reviewed this course proposal and I am requesting approval by the Monroe Board of Education.

Title	Signature	Date
Recommended by:	Mark Schwarz, Asst. Principal and IL CTE	8/28/14
Department Chair:	Mark Schwarz	09-02-14
Principal/Director:	Joe Kobza	09/02/14
Director of Instruction:	Sheila Casinelli	09/02/14
Assistant Superintendent:	John Battista	09/02/14
Superintendent:		
Board of Education		

**MONROE CURRICULUM COUNCIL
MONROE BOARD OF EDUCATION**

Monroe, Connecticut

Instructional Materials/Textbook Proposal Form

Course Title			
Subject Area		Grade Span	
Proposal Author(s)		Date	
Course of Study	New		Revised
	Semester		Full Year

Respond to the following questions as they apply to your proposal.

Part A: Textbook Proposal

Textbook Title:			
Author/Editor:		Copyright Date:	
Publisher:		Latest Revision Date:	
Recommended for use in grade(s)		High/Avg/Low level:	
Subject			
Course Title:			

Part B: Textbook Information

Rationale for Requested Textbook

Why is this textbook needed? Include an explanation of how the text relates to the proposed course of study?

Identify other textbooks that were considered, and include the publishers/copyright.

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Why was the recommended textbook chosen?

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Part C: Funding

Funding for this course should be included in the budget for the implementation year. Failure to include the funding may result in a delay in implementation. Courses added to program of studies booklets prior to approval by the Board of Education should include "pending BOE approval" alongside the course title.

Budget Request:

Item	Quantity	Unit Price	Extended Price
Textbooks			
Workbooks			
Software/Online textbook			
Equipment/Hardware*			
Other supplies	--		
		Total	TBD

*Describe Equipment/Hardware

<p>*No text and/or workbook expenses are foreseen. Instructional supplies are required for this class including seeds, gardening supplies, soil, test kits, fertilizers, potting equipment, etc. Some of these funds have been and can continue to be generated through funds raised by the Culinary Arts program which will benefit by receiving some of the food crops raised by students in the Horticulture class. Also, funding for the garden and greenhouse has been obtained by food services and other sources.</p>

Part D: Approval (Signatures required)

I have reviewed this course proposal and I am requesting approval by the Monroe Board of Education.

Title	Signature	Date
Recommended by:		
Department Chair:		
Principal/Director:		
Director of Instruction:		
Assistant Superintendent:		
Superintendent:		
Board of Education		