



Marine Science Magnet High School

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SCI0800-Aquatic Husbandry

2020-2021

A Day, **Period 2**, *Aquaculture Lab*

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Required Texts/Readings:

Readings may be assigned by the teacher.

Course Description:

In this course, students will be responsible for the operation and management of a closed recirculating aquaculture system (RAS). Topics will include lab maintenance, monitoring of water quality and organisms, breeding strategies, seafood management, HACCP training, and life support construction. Students will be responsible for the ownership of the MSMHS Aquaculture Lab and all of the organisms that are being cultured. Students will also work with local farmers and seafood wholesalers.

Student Learning Expectations and Outcomes:

The following MSMHS Learning Expectations are the focus of the Marine Studies Program, however, there are several other learning expectations aligned with various assignments within the courses offered in the Marine Studies Program.

- 1. Read and write effectively for a variety of purposes.**
- 2. Speak effectively with a variety of audiences in an accountable manner.**
- 3. Make decisions and solve problems independently and collaboratively.**
- 4. Apply scientific knowledge and concepts to variety of investigative tasks.**
- 5. Contribute to a positive learning environment with respect and responsibility.**

Materials Needed:

Designated notebook or binder, Pens/Pencils, Paper, Highlighters, MSMHS Laptop

Classroom Behavior and Rules:

Students, teachers, and administrators have the right to expect mutual courtesy, fair and equitable treatment and to be informed of their rights and responsibilities. The goal of the Marine Science Magnet High School is to assist students in developing self-direction, self-discipline, and self-management and to provide opportunities for responsible decision-making. However, in the pursuit of these goals, those students who infringe on the rights of others, or who violate school policies and regulations, will be subject to discipline. The constitutional rights of students and staff shall be preserved and protected.

The conduct of students in school has an important effect on the student's academic achievement, and others in the classroom and the greater school learning environment. While ultimate responsibility for student behavior rests with the parents and the students themselves, the school has an obligation to provide leadership in this respect and to insure that appropriate standards are maintained when students are under school supervision. When anyone's rights are violated or when someone violates the rules and regulations, we must all be concerned. MSMHS is committed to providing a safe, respectful, and nurturing environment in which all students can learn.

Tardy Policy

"Tardy" is defined as being late to school, class or activity without permission of school personnel. Students who arrive to school after 7:30 a.m. must report to the main office. Teachers will not allow students admittance to class after 7:30 without a tardy pass from the office. Oversleeping or missing the bus are not acceptable excuses. Tardies will be dealt with as follows, per semester:

- *1st tardy – pass will be given*
- *2nd tardy – pass will be given*
- *3rd tardy – Final warning - student will have a tardy conference with the Assistant Principal; parent/guardian notified to discuss consequences of continued tardies*
- *4th tardy - office detention*
- *5th tardy – office detention*
- *6th tardy – parent/guardian and student meeting with the Assistant Principal, double office detention, parking privileges revoked and late arrival/early dismissal privilege removed for the remainder of the semester*
- *7th tardy – two office detentions*
- *8th tardy – two office detentions*
- *9th tardy – parent/guardian and student meeting with the Assistant Principal; possible referral to proper authorities; notification of loss of credit*
- *10th tardy – loss of 0.5 credit in appropriate class*

Homework and Absences

Students are responsible for obtaining and completing all homework assignments during the time they are absent, as well as obtaining any materials needed to complete the assignments. Any exceptions must be discussed with the classroom teachers. Students are expected to communicate with their teachers about their absences and expected work.

Make-Up Work

Students who have been absent are required to consult their classroom teachers about work missed as a result of absence. Students will need to make up missed assignments in a timely manner or in the time specified by the classroom teachers. When absent, the student is responsible for work previously assigned and due on the day he/she returns (unless excused by the teacher). Students

who receive discipline for cutting class must make up the work but may not receive credit for the completed work. Students returning from suspension must complete missing work and/or tests/quizzes within the same number of days as the suspension served. For example, a student suspended for three days has three days in which to make up the work.

Late Work

All teachers will accept late work one week prior to the end of the appropriate quarter as listed on the school calendar available in the Parent-Student Handbook; 50% is the maximum penalty for a late submission. In order to be accepted, the work must be complete and meet all assignment requirements.

Assignments and Grading:

Grading of student performance in courses is based on a fifty-point scale. Overall evaluation in a course is measured in a number of ways: class participation, homework, written work, performance assessments and subjective and objective testing at intervals during the course.

MSMHS teachers create common syllabuses that contain specific policies and procedures specific with to their department's PLCs. Grading is scaled in a uniform manner which allows for a simplistic approach for students and parents to follow. Below is the breakdown of the grading scales for assignments and assessments:

<i>Homework:</i>	<i>10 pt. increments</i>
<i>Classwork:</i>	<i>10 pt. increments</i>
<i>Quiz:</i>	<i>100 pts.</i>
<i>Test:</i>	<i>200 pts.</i>
<i>Lab/Lab Reports:</i>	<i>100 to 200 pts.</i>
<i>Papers/Projects:</i>	<i>100 to 200 pts.</i>
<i>Unit Tasks:</i>	<i>100 to 200 pts.</i>
<i>Midterms & Finals:</i>	<i>400 pts.</i>

Teachers may adjust the amount of points per assignments based upon the rigor, complexity, or time needed to complete the task. Teachers may also announce that homework assignments are worth additional points the day the assignment is due as a "pop quiz." These pop homework assignments are used to ensure that students are putting maximum effort into their homework and classwork assignments.

Extra Help:

Students interested in receiving extra help from teachers, or in meeting with their teacher before or after school, need to schedule a mutually agreed upon time to meet with their teacher. Teachers may require specific procedures for requesting appointments for extra help. Please know that teachers will only be able to meet with students on Wednesdays for a limited time due to regularly scheduled faculty or Professional Learning Community (PLC) meetings beginning at 2:30 pm. All teachers will explain the desired procedures in their course syllabus.

Retakes/Extra Credit Policy

The MSMHS Marine Studies Department follows a common policy and will allow retakes/extra credit at the discretion of the teacher.

Retake Policy: In order to complete a retake, students must have earned a score less than 70% on the initial assessment. They must schedule a conference outside of class with the teacher within one week of the initial test to discuss their grade. At this conference, the teacher will decide if a retake is

allowed. If the retake is granted, the teacher will average the two test grades together for the student's final test grade.

Cell Phones

Cell phones are permitted in school, however, while in class all cell phones must remain in their backpack and on "silent" unless requested to be turned off by the teacher or administrator. Cell phones may be used in class if authorized by the teacher or staff member in the delivery of curriculum and instruction. If a teacher determines a student's phone needs to be taken away due to the student not adhering to the classrooms rules, the phone will be taken by the teacher and kept in a secure location in the classroom until it is returned to the student. If the student refuses to give up his/her phone, the student will be referred to administration as being insubordinate. Cell phones may be used before, during lunch, or after school hours.

Grade/Grade Reporting:

Grading of student performance in courses is based on a fifty-point scale. Overall evaluation in a course is measured in a number of ways: class participation, homework, written work, performance assessments and subjective and objective testing at intervals during the course. Course grades are an average of quarter grades that includes final exams.

The following table shows the letter grades equivalent to numerical grades and GPA.

Letter	Numerical Equivalent	GPA Equivalent	Honors Weighting	AP/ECE Weighting
A+	97-100	4.3	4.52	4.73
A	93-96	4.0	4.20	4.40
A-	90-92	3.7	3.89	4.07
B+	87-89	3.3	3.47	3.63
B	83-86	3.0	3.15	3.30
B-	80-82	2.7	2.84	2.97
C+	77-79	2.3	2.42	2.53
C	73-76	2.0	2.10	2.20
C-	70-72	1.7	1.79	1.87
D	65-69	1.0	1.05	1.10
F	50-64	0.0	0.0	0.0
P	65-100	-----	-----	-----

Academic Integrity:

To support academic integrity, MSMHS may use a technology tool for plagiarism prevention such as Turnitin.com. Students are required to submit major papers to this service and receive guidelines and training in its use if requested by the teacher. All work submitted by students should be a true reflection of their effort and ability. If submitted work or tests are not, then the student has manifested unacceptable academic behavior.

Plagiarism

Plagiarism is defined as intentionally or unintentionally presenting another's work as your own. Any source material (electronic, written, verbal) accessed to complete an assignment must be cited. Plagiarism includes the following:

- Copying verbatim or blending source material with your own without proper attribution,
- Paraphrasing source materials or borrowing ideas, terms, or concepts without acknowledging the source,
- Inventing sources or false attributions for sources,
- Supplying/selling your work to another or purchasing/copying another's work.

Cheating

Cheating is defined as copying all or part of an assignment or assessment or allowing another to copy your work. It is also doing someone's work or having someone else do your work. Cheating includes the following:

- Using unauthorized materials, devices, or assistance of any kind to complete your work or assessment, including on-line transfers,
- Collaborating on a task without the teacher's authorization, as well as providing or receiving information so as to give/gain an unfair advantage,
- Aiding another in cheating.

Other Academic Misconduct

Other forms of serious academic misconduct include:

- Altering grades,
- Stealing or obtaining test/assessment materials or answers,
- Submitting the same (or nearly the same) work for more than one class without disclosure or approval,
- Falsifying information on school related documents and forms.

ANY behavior that can be defined as cheating/plagiarism represents a violation of mutual trust and respect essential to education at MSMHS. Students suspected of cheating should expect to be questioned by their teacher. Students violating this rule are subject to the following penalties:

- A "zero" on the submitted work; notification of parents; written summary of event and action taken placed in the student file.
- If a student is found to have cheated/plagiarized a second time or is involved in a particularly serious act of cheating/plagiarism, the student will be referred to administration for appropriate penalties beyond those listed above. Additional penalties include such consequences as notification to award and scholarship committees; suspension from class or school and notification to the student's prospective colleges; loss of or disqualification from honors/privileges and positions (e.g. NHS, school leadership position).

Course Unit Outline - Enduring Understandings and Tentative Dates:

Note: Teacher has discretion to change throughout the year.

Unit I – Biosecurity

September-October 2020

Enduring Understandings

- Standard Operating Procedures (SOPs) are put in place at a facility in order to maintain the highest standard of care for all organisms.
- Each species of fish, that is being grown, has its own unique habitat requirements and potentials risks that need to be considered.

Unit II – Closed Systems

November-December 2020

Enduring Understandings

- Each species of fish has unique habitat requirements that are essential to its growth.
- The best system design is directly related to the unique needs of each aquaculture facility

Unit III – Breeding

January-February 2021

Enduring Understandings

- Aquaculturists can use knowledge of fish breeding habits and behaviors to maximize efficiency in a closed system
- Closed systems can be designed to improve fish breeding efficiency in a variety of ways

IV – Aquaponics

March-April 2021

Enduring Understandings

- There are a variety of aquaponics system that can be built to grow various species of plants and fish
- Aquaponics can be designed to create a mutually beneficial environment for a variety of organisms to be grown together in one system

V – Aquaculture Innovation

May-June 2021

Enduring Understandings

- Aquaculture is the fastest growing form of food production in the world
- Advances in sustainable aquaculture practices are increasing as the demand for clean and safe seafood increases every day.