Homeland Security Sciences

Course Outline
QACHS
Location: Portable 7

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COURSE DESCRIPTION:
The Homeland Security Sciences course serves as a broad, current, and multidisciplinary approach to the contemporary challenges homeland security officials face in their attempt securing America. This course builds upon the knowledge gained in the Foundation of Homeland Security and Emergency Preparedness course. The most critical threats confronting Homeland Security will be examined.

Students will:
- Demonstrate competency in the collection, processing, analyses, and evaluation of evidence at a CBRNE incident scene.
- Identify common elements of CBRNE/WMD incidents, exposure routes, indicators of potential hazardous materials, bomb threat procedures, suspicious package indicators, response procedures, and common materials used to make booby traps.
- Identify and discuss the role that the intelligence community plays in contemporary national security.
- Identify the Federal strategy and innovative steps to enhance national protection and reduce America’s vulnerability to terrorist attacks.
- Identify homeland security communications and the main elements in the risk and crisis communications.
- Identify contemporary border and transportation security challenges America faces, as well as different methods employed out government to address these challenges.

COURSE OUTLINE:

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<th>Unit of Study</th>
<th>Time Frame</th>
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<td>Unit 1 – Intelligence and Counterterrorism</td>
<td>3 weeks</td>
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<td>Unit 2 – Science and Technology in Homeland Security</td>
<td>5 weeks</td>
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<td>Unit 3 – Homeland Security Risk Communications</td>
<td>3 weeks</td>
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<td>Unit 4 – Chemical, Biological, Radiological, Nuclear, Explosives</td>
<td>4 weeks</td>
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<tr>
<td>Unit 5 – Transportation and Border Security</td>
<td>3 weeks</td>
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EXPLANATION OF ASSESSMENTS/ACTIVITIES/PROJECTS:

1. **Group Activities:** Some research activities will be done in groups of 2-4 students with group data, and individually prepared calculations, analysis, and conclusions. Students will be given class time to complete most activities. If activities require time outside of the classroom to complete, due dates will be explicitly provided. No credit will be given for work that is plagiarized/copied or completed without following assignment guidelines.

2. **Individual Activities:** Some assignments will be required to complete in class. If a student has a “UND” coded absence, then their grade for that assignment is a Zero (0) with no possibility for makeup. Students may only make up an assignment if they are absent due to a documented excuse.

3. **Federal Emergency Management Agency Courses:** See below

4. **Final Exam:** Students will take a final exam for Homeland Security Science. This cumulative exam is given near the end of the semester and is required by the State. Students are to keep a neat notebook to prepare for this exam. The notebook is to include all notes and handouts from the semester

CLASSROOM REQUIREMENTS:

1. **Courtesy and respect for classmates and the teacher must be displayed at all times.** This relates to another person’s space, property, safety, and emotional or physical condition. Lack of respect for other students’ opportunity to learn, including classroom disruptions will begin with a verbal conference with student(s). Serious or repeated incidents will result one or more of the following: daily work impact, parent/guardian contact, detention, administrative referral, or removal from class.

2. **Safety is CRITICAL! There is NO TOLERANCE for “HORSE-PLAY” in this class.** Failure to comply with any safety rules set forth in the county guidelines will result in immediate removal from the lab, and a zero grade for the current lab. Serious incidents will also result in detention and/or administrative referral.

3. **No food, drink, gum, or candy is allowed in the Lab AT ANY TIME.** This is for safety, federal standards, and sanitary purposes. Consequences begin with verbal warning and confiscation of item. Beyond two incidents, detention will be assigned or a referral written.

4. **Students are responsible for maintaining a clean lab area and returning materials in proper condition.** Students will stay after class or after school to reinforce proper behavior if needed. Intentional deviations will result in detention or referral. If damage to school equipment occurs intentionally or due to horseplay, the students will be responsible for the purchase on comparable materials.

5. **Each student is expected to work up to his or her capabilities and to submit quality work created solely by the student.** Copying another person’s work, using “cheat” sheets, or plagiarizing materials will result in a ZERO grade on that assignment or assessment. Notification will also be made to the parents and the National Honor Society.

6. **Come prepared.** Students must have notebooks and pen/pencil daily. For labs, students without shoes will not participate and will be given an alternative in-class assignment with a
maximum possible grade of 80%. (Advance notice is given for shoes). Excused absence on a lab
day will result in an alternative assignment with no grade penalty. Unexcused absences will be
given a zero for the lab.

7. Approved **early dismissal** must be communicated at the beginning of class. Students are
responsible for all obtaining and on-time completion of classwork and assessments. Students
are responsible for arrangements to get notes from a classmate.

8. Observe school **Dress code**. School policies will be observed regarding poor choices.

**Absence Policy:** All students are expected to be in class on a daily basis. Regarding unit tests, if you
are (excused) absent the day of the test, you will be expected to **make it up within three days**.
Tests will be announced well in advance, so **if you are absent the day before a test, you are
expected to come in prepared to take the test with the rest of the class**. If you have been absent
more than one day, arrange for a missed test when you return to class. Tests must be made up no
later than one week past the original test date.

**Portfolio Notebook Policy:** Students are expected to keep an organized portfolio notebook that is
**adequate** to support their learning and prepare for the final exam. Key information or assignments
should be easily located. The lab section of the notebook must contain records of all activities
completed for a given activity.

**EXPECTATIONS:**

Students are expected to come to class every day prepared to work. This means having required
materials, completing assignments, and participating in class. Overall, I expect **RESPECT** in my
classroom; respect for oneself, respect for others, respect for property, and respect for learning.

**PROCEDURES:**

1. **TESTING:** Students have the option to make up any test that they have scored less than 70%
on. The student has 10 days from the time they received the test back to make it up. The
highest grade that may go into the grade book for a retake is 70%.

2. **LATE WORK:** **I will not accept late homework.** However, other late assignments may be turned
in; though they will be deducted one letter grade for each day overdue. The last day an
assignment may be turned in is the test date for that unit. If your absence is excused, you
have three days to make up any missed work according to school policy. Please be aware
that no credit will be given for any assignments (this includes tests) completed or due when a
student has an unexcused absence.

3. **TARDINESS:** Tardiness Policy: All students are expected to be on time (i.e. when the bell
rings). Please plan bathroom, locker, and fountain visits between classes. Unexcused tardiness
will result in:
   - First time: Verbal warning
   - Second Time: Notification of parent or guardian
   - Third time: Detention
   - Fourth time: Referral

4. If a student is significantly late (more than 5 minutes) to class without a note from another
teacher, a discipline referral will be made to the administration.

5. **NOTEBOOKS:** Notebooks should be organized in 3 sections: Warm-Ups, Handouts, and
Other.
6. PASSES: One student out at a time. Ask to go and take the appropriate pass. Bathroom trips and the like will be limited if a student abuses the right to leave the classroom. Students may not leave the classroom during the first 10 and last 10 minutes of class.

7. DO NOT keep a single ear bud or one of your headphones on during class.

8. CELL PHONES: We will follow the school-wide cell phone policy—phones are not to be seen from bell to bell or they will be confiscated and turned in to the main office. Students will receive a handout explaining the chain of discipline regarding cell phones.

TEXTBOOKS/MATERIALS:
MATERIALS REQUIRED:

- 2 or 3 inch 3 Ring Binder with dividers and loose-leaf paper
- Pens and pencils
- CALCULATOR (only basic functions are necessary….mathematical calculations are difficult without the use of a calculator)

GRADING POLICY:

1. Summative: “Mastery Assessments” (Unit Tests, Unit Projects, etc.) 45%
2. Formative: “Progress Assessments” (Homework, Classwork, Quizzes, etc.) 40%
3. Final Exam 15%

LATE ASSIGNMENT REDUCTIONS:

- excused absence: 3 days to make up the assignment without penalty upon return to school
- unexcused absence: grade of zero
- present in school, but assignment not complete: grade of zero

FEMA SID & INDEPENDENT STUDY COURSES: National Incident Management System (N.I.M.S.):

- **https://cdp.dhs.gov/femasid/register**

**N.I.M.S.:** The National Incident Management System (NIMS) Training Program identifies those courses critical to train personnel capable of implementing all functions of emergency management. This program establishes the NIMS core curriculum to ensure it adequately trains emergency and incident response personnel to all concepts and principles of each NIMS component.

- **ICS-100 Introduction to the Incident Command System:** This independent study course introduces ICS and provides the foundation for higher level ICS training. It describes the history, features and principles, and organizational structure of the system. This course also explains the relationship between ICS and NIMS.

- **ICS-200 ICS for Single Resources and Initial Action Incidents:** This independent study course is designed to enable personnel to operate efficiently during an incident or event within the ICS. ICS-200 provides training and resources for personnel who are likely to assume a supervisory position within the ICS.

- **IS-700 NIMS, an Introduction:** This independent study course introduces the NIMS concept. NIMS provides a consistent nationwide template to enable all government, private-sector, and nongovernmental organizations to work together during domestic incidents.

- **IS-800 National Response Framework (NRF), an Introduction:** The course introduces participants to the concepts and principles of the NRF.
The NIMS Training Program lays out a conceptual framework that maintains a systematic process for the development of training courses and personnel qualifications. This process produces trained and qualified emergency management personnel. Based upon emergency management and incident response practices, NIMS represents a core set of doctrine, concepts, principles, terminology, and organizational processes that enables effective, efficient, and collaborative incident management.

You are to independently take and pass each of the above courses (online).

Procedure:

- Log on to https://training.fema.gov/nims/
- CLICK on one of the courses listed above (ICS-100, ICS-200, ICS-700, ICS-800)
- On each of the courses ‘home’ page you may:
  - “Take this course” : CLICK on ‘Take Interactive Web-Based Course’
  - “Classroom materials” : CLICK on ‘Download Classroom Materials’
  - “Take final exam”: CLICK on ‘Take Final Exam Online’

**VERY IMPORTANT!!!!!!**

When you log in using your FEMA SID (Student Identification Number), you

**MUST, MUST, MUST, MUST**

...use your personal email address.

If you do not, you will not be able to receive your certificate of completion. The school server is not configured for you to receive email notifications from other than qacps.org email addresses.

* When you complete and pass the final exam for each course, you will receive a .pdf file in an email from FEMA.

* **FORWARD** that email to me and we can print out your certificate for you to keep.

* You will then be graded upon successful completion of all four courses (formative) and the completion of the NIMS final exam (summative)!

**DO NOT LOSE THIS INFORMATION!**

NAME: ___________________________________________  
EMAIL: _________________________________________________________________________  
FEMA SID: ________________________________________  

FEMA ICS-100: https://training.fema.gov/is/courseoverview.aspx?code=IS-100.b DUE: 9/27  
FEMA ICS-800: https://training.fema.gov/is/courseoverview.aspx?code=IS-800.b DUE: 1/3  

**FEMA NIMS FINAL EXAM: 1/17**
“I have read and understand the Homeland Security Science Syllabus. I understand that within the course there are potential topics that are of a sensitive nature. Images of a catastrophic nature may be included within the course instruction which may include, but not limited to terrorism, warfare, natural and man-made disasters. I understand this is integral to the curriculum. My child is allowed to participate in this class.”

Date: __________________

Student Name: ___________________________________________ Student Signature: __________________________________________

Grade: 10, 11, 12 (circle one)

Parent or Guardian Name(s): __________________________________________

Parent or Guardian Signature(s): __________________________________________

Home Phone Number: ____________________________ Parent Work Phone Number: ____________________________

Parent Cell Phone Number: ____________________________ Parent Email Address: ____________________________

Please use the space below or on the reverse for any other pertinent information that you would like to provide:

**EMERGENCY PROCEDURES**

All emergency procedures (fire drills, weather drills, etc.) have been reviewed with the students as they pertain to evacuation and/or shelter in place situations. Each drill’s instructions are specific to the classroom location and crisis situation. If you have any questions or concerns about what your student should do in the case of an emergency, please speak to your student and/or email me directly.

*Please return AS SOON AS POSSIBLE to teacher. Keep pages 1-2 for your information.*
In addition to this syllabus, students and parents/guardians are required to Read and Sign the Laboratory Student Safety Rules set forth by Queen Anne’s County Board of Education and to pass a lab safety quiz. This is to ensure a safe environment in the laboratory where everyone is performing to the best of his/her own ability. Students are NOT permitted to perform any lab work until the safety form has been signed and the lab quiz has been passed.

Queen Anne’s County Student Safety Contract

PURPOSE
Science is a hands-on laboratory class. You will be doing many lab activities which may require the use of chemicals or other hazardous materials. Safety in the classroom is the #1 priority for students, teachers, and parents. To ensure a safe science classroom, a list of rules had been developed and provided to you in this student safety contract. Two copies of this contract will be provided to you. One copy must be signed by you and your parent or guardian before you can participate in the lab activities. A second copy will remain in your science notebook as a constant reminder of the safety rules.

GENERAL RULES
1. Conduct yourself in a responsible manner at all times in the lab.
2. Follow all written and verbal instructions carefully. If you do not understand part of the instructions, ask.
3. Never work alone. No student can work in the lab without the teacher present.
4. When first entering the science room, do not touch any equipment, chemicals, or other materials until you are instructed to do so.
5. Do not eat food, drink beverages, or chew gum in the lab. Do not use glassware as containers for food or beverages.
6. Perform only those experiments authorized by the teacher.
7. Never fool around in the laboratory. Horseplay, practical jokes, and pranks are dangerous and prohibited.
8. Work areas should be kept clean at all times.
9. Keep aisles clear & push your chair under your desk when not in use.
10. Know the locations and procedures of all safety equipment including the 1st aid kit, eyewash, safety shower, fire extinguisher, and fire blanket. Know where the fire alarm and the exits are located.
11. Always work in a well-ventilated area.
12. Be alert and proceed with caution at all times in the lab. Notify the teacher of any unsafe conditions you observe.
13. Dispose of all chemical waste properly. Never mix chemicals in sink drains. Sinks are to be used for water and those solutions designated by the teacher.
14. Labels and equipment instructions must be read carefully before use.
15. Keep hands away from face, eyes, mouth and body while using chemicals or preserved specimens. Wash your hands with soap and water after performing all experiments. Clean all work surfaces and equipment at the end of all labs.
16. Experiments must be monitored at all times. Do not walk away from your lab stations while there is a lab in progress.
17. Know what to do if there is a fire drill during a laboratory period; containers must be closed, gas valves turned off, fume hoods turned off and any electric equipment turned off.
18. Handle all living organisms used in a lab activity in a humane manner. Preserved biological materials are to be treated with respect and disposed of properly.
19. When using scalpels and other sharp instruments, always carry with tips and points pointing own and away from your body. Never try to catch a falling sharp instrument. Grasp sharp instruments only by the handles.

CLOTHING
20. Anytime chemicals, heat or glassware are used, students will wear lab goggles. There will be no exceptions to this rule!
21. Contact lenses should not be worn in the lab unless you have permission from your teacher.

22. Dress properly during lab activities. Long hair, dangling jewelry, and loose or baggy clothes are a hazard in the lab. Long hair must be tied back and dangling jewelry and loose or baggy clothes must be secured.

23. Shoes must completely cover the foot. NO SANDALS OR FLIP FLOPS ON LAB DAYS!

**ACCIDENTS & INJURIES**

24. Report any accident (spill, breakage, etc.) or injury (cut, burn, etc.) to the teacher immediately – no matter how trivial it may appear.

25. If you or your lab partner get injured, get your teacher’s attention immediately.

26. If a chemical splashes in your eye or on your skin, immediately flush with running water for at least 20 minutes. Notify teacher immediately.

**HANDLING CHEMICALS**

27. All chemicals in the lab are to be considered dangerous. Do not touch, smell, or taste any chemicals unless instructed to do so by your teacher. The proper technique for smelling chemical fumes will be demonstrated for you.

28. Check the label on chemicals bottles twice before removing any of the contents. Take only as much of the chemical that you need.

29. Never return unused chemicals to their original containers.

30. Never use mouth suction to fill a pipet.

31. Always add acid to water, swirl or stir the solution and be careful of the heat produced.

32. Never dispense flammable liquids near an open flame or heat source.

**HANDLING GLASSWARE & EQUIPMENT**

33. Never handle broken glass with your bare hands. Use a dust pan and brush. Dispose of broken glass in the designated glass disposal container – not the trash can.

34. Always lubricate glassware when inserting or removing glass tubing from rubber stoppers. Protect your hands with gloves or towels when inserting glass tubing into or removing it from a rubber stopper.

35. When removing an electrical plug from an outlet, grasp the plug—not the cord. Make sure hands are dry before touching an electrical switch, plug, or outlet.

36. Examine glassware prior to use. Never used chipped or cracked glassware. Never use dirty glassware.

37. Do not immerse hot glass ware into cold water or place on cold counter; it may shatter.

**HEATING SUBSTANCES**

38. Use extreme caution when using a burner. Take care that hair, clothing and hands are a safe distance from the flame at all times.

39. Never leave a lit burner unattended. Never leave anything that is being heated unattended.

40. Do not point the open end of a test tube being heated at yourself or others.

41. Never look into a container that is being heated.

42. Heated metals and glass remain very hot for a long time. Use tongs or heat-protective gloves if necessary.

43. Do not place hot apparatus directly on the lab desk. Always use an insulating pad.

44. When heating glass, allow time for the glass to cool before further handling. Hot and cold glass looks the same.

Please review the information contained in this syllabus with your parent or guardian.

Sign and return the last page of this syllabus to me.

(You will not be allowed to participate in labs until this is turned in)
SAFETY QUESTIONS
(CIRCLE ANSWER)

Do you wear contact lenses?
Yes or No

Are you color blind
Yes or No

Do you have allergies?
Yes or No

If so, list specific allergies:
____________________
____________________
____________________

LAB SAFETY AGREEMENT

I, ______________________ have read and agree to follow all of the safety rules set forth in this contract. I realize that I must obey these rules to ensure my own safety, and that of my fellow students and teacher. I will cooperate to the fullest of my extent with my teacher and fellow students to maintain safe lab environment. I will also closely follow the oral and written instructions provided by the teacher. I am aware that any violation of this contract that results in unsafe conduct in the lab or misbehavior on my part, may result in being removed from the lab, detention, receive a failing lab grade, or permanent dismissal from future lab activities.

Student Signature

Date

Dear Parent or Guardian:

Your signature on this contract indicates that you have read this Student Safety Contract, are aware of the measures taken to ensure the safety of your son/daughter in the science lab, and will instruct your son/daughter to uphold his/her agreement to follow these rules and procedures in the lab.

Parent/Guardian Signature

Date