**Grassy University of Santo Tomas (GUST)**

**STEM Professor Jodel Carlyle P. Deauna, M.D., M.O.H./EVOMED**

**numbers115@aol.com**

**Summer 2025**

**Pathology EVOMED Military Science Artficial Intelligence (PEMSAI 201)**

**FOR GLOBAL FARMER-ENGINEERS, FOR GLOBAL STEM MAJORS, and FOR MY GLOBAL DESCENDANTS**

**“Free”**

**Prerequisites**

**Evo Med 101**

**Mom’s Grassy Chess Academy 101**

**APEMS 201**

**Course Description**

This course provides the Farmer Engineers with an integrated understanding of Pathology, EVOMED, Military Science, and Artificial Intelligence. This course is a continuation of APEMS 201 and will start with the special senses. Also, this course includes the cardiovascular, respiratory, reproductive, immune, and digestive systems. All systems are correlated with Evolutionary Medicine, and Military Science. Furthermore, this course will be correlated with Artificial Intelligence, Simulations and Professional Anticipatory Tactics (SAPAT) and Global Response and Mobilization (GRAM) concepts.

.

**Textbook and Supplemental Materials**

* Academic Lectures of **Professor Deauna**
* Open Educational Resources (funded by **Bill Gates**)
* Any College Level Biology Textbook, Anatomy and Physiology Textbook, Evolutionary Medicine Textbook for Medicine, Military Science (Chess Science), and Artificial Intelligence Textbook.

**Equipment**

Computer with access to internet

USB

**Course Objectives**

* The Global Farmer-Engineer should be able to identify anatomically the receptors of the eyes and the ears and describe their physiology.
* The Global Farmer-Engineer should be able to describe the structures of the heart and trace blood flow through the heart, through the blood vessels away from the heart, and to the blood vessels towards the heart.
* The Global Farmer-Engineer should be able to describe the anatomy and physiology of the respiratory system in general, to describe the structures and functions of the larynx in particular.
* The Global Farmer-Engineers should be able to identify the anatomy and physiology of the male and female human reproductive systems.
* The Global Farmer-Engineers should be able to differentiate innate and adaptive immunity and the evolution of both.
* The Global Farmer-Engineer should be able to identify the different organs of the human digestive system and the accessory organs of the human digestive system.
* The Global Farmer-Engineer should be able to explain what artificial intelligence (AI) is and correlate with PEMSAI and the “JODEL” Project.
* The Global Farmer-Engineer should be able to perform simulations and apply corresponding professional anticipatory tactics for the simulations.
* The Global Farmer-Engineer should be able to implement Global Response and Mobilization accordingly.
* The Global Farmer-Engineer should be able to integrate Evomed 101, Mom’s Grassy Chess Academy 101, and APEMS 201 concepts with PEMSAI 201.

**Objectives for the week**

Upon completion of the Activities For This Week, you should be able to

* describe how light stimulates nerve impulses production and how the visual pathology are connected from the front of the eyes to the structures of the brain involved.
* describe the structures involved in hearing from the cochlea to the structures of the brain involved.
* describe the anatomical structures of the heart and should be able to trace the flow of the blood from the heart to the aorta, arteries, arterioles, capillaries, venules, venae cavae, and back to the heart.
* explain the action potential happening in the cardiac muscles.
* identify the organs of the respiratory system.
* describe the laryngeal anatomy and to identify the anatomy of the airways.
* describe the anatomy of the male and female reproductive systems.
* compare and contrast mitosis and meiosis.
* differentiate innate immunity and adaptive immunity.
* describe aging and connect aging concepts with immunity.
* identify the anatomy of the human digestive system and to describe the physiology of each organ.
* identify the accessory digestive organs and describe each organ.
* define what artificial intelligence is.
* connect the concepts of PESILAD and the concepts of the JODEL PROJECT with the JODEL PLANE Hazards Controls and Artificial Intelligence.
* perform simulations and to use the OUTSIDE THE BOX concepts accordingly.
* apply professional anticipatory tactics using the CHESS CRADLE.
* use Global Response Concepts (use of controls), and CEO (Connecting The Concepts, Evolutionary Medicine, and OUTSIDE THE BOX).
* use mobilization concepts of Command Center.
* integrate the concepts learned in EVOMED 101, Mom’s Grassy Chess Academy 101, and APEMS 201 with PEMSAI 201.
* apply pathological concepts, EVOMED concepts, Military Science concepts, and Artificial Intelligence concepts to better understand the world and the problems that affect our society, global events, and the life of the farmer-engineer.

**Delivery and Netiquette**

 As an online class, the Farmer-Engineers should understand the importance of scheduling, and work in a timely and professional manner with their binary and their squad if there is one. The binary should accomplish the work together before 2000 Hours on the Fridays of each week. The binary should follow the military netiquette in our online course. The rules (administrative controls) are as follows:

1. The Global Farmer-Engineer should focus on “concepts”. The concepts are the main ideas of each week.
2. Post positive messages with minimal grammatical and spelling errors with your binary.
3. Use MLA format for your e-mails and your posts to your binary.
4. Remember the chain of command is from the General, Colonels, Majors, Captains, Lieutenants, Squad Leaders, and the Binary.
5. Remember, your online posts are accessible to everyone, be constructive.
6. Always refer to your binary with regards to decision making.
7. The Global Farmer-Engineers should consider the internet as the virtual classroom.
8. The Global Farmer-Engineers should be respectful and professional on the internet at all times.

**Learning Activities and Assessments**

A “weekly activities handout” will be available every Monday. It will contain the activities for the whole week. The activities are:

1. **Discussion Forum (10%)**

The Global Farmer Engineers should answer the questions in the Discussion Forum. The Discussion Forum used to be with two parts. This time, there is only one part, which is your response to the main question(s). The second part is your PESILAD response.

1. **Connecting The Concepts (10%)**

There are five concepts that you have to use in sentences every week. Connecting The Concepts exercise is a critical thinking exercise. I designed and I have been using Connecting The Concepts for 30 years now. I will explain this further in the first handout. Connecting The Concepts is related to your Binary Project Paper, which you have to produce before the end of this course.

1. **The JODEL Project (30%)**

You have to write a 16-page paper on the JODEL Project. There are five components of the JODEL Project. The first component is the PESILAD (2 pages). The second component is the JODEL Plane (5 pages). The third component is the Hazards (2 pages). The fourth component is the Controls (2 pages). The fifth component is Rice Production (3 pages). The bibliography is one page. The cover page is one page. This is the 16-page report, which should be MLA formatted. The Jodel Project will be updated every week. This is an individual project. The Jodel Project is due the Week of 7/21/2025.

1. **Simulations and Professional Anticipatory Tactics (SAPAT) Exercises (10%)**

**Simulations and Professional Anticipatory Tactics (SAPAT) Exercise**

There is one **SAPAT** exercise that you have to perform each week. The **SAPAT** exercise is aligned with the objective of this course. The **SAPAT** exercise will provide you with the opportunity to apply the concepts learned to real world situations and problems by using simulations and tactics.

1. **Global Response and Mobilization (GRAM) Exercises (10%)**

**Global Response and Mobilization (GRAM) Exercise**

There is one **GRAM** exercise that you have to perform each week. The **GRAM** exercise is another application of Global Farmer-Engineer’s knowledge, in which you will perform Global Response and Mobilization exercise using Engineering Control, Administrative Control, and the use of Personal Protective Equipment concepts. Also, you will perform Global Response and Mobilization exercise using Connecting The Concepts, Environmental Medicine, Outside The Box (CEO) concepts.

1. **PESILAD (10%)**

There is a PESILAD exercise wherein the Farmer-Engineer have to research why the PESILAD is with a certain diagnosis. PESILAD stands for “Patient, Etiology, Signs and Symptoms, Impression, Laboratory, Ancillary Procedures, and Diagnosis. All pertinent data will be given. It is for the Farmer-Engineer to know the reason why the data was given.

 **G. Open Questions**

Questions can be related to EVOMED 101, Mom’s Grassy Chess Academy 101, APEMS 201, and other College Science Concepts. Questions can be pertaining to diseases. Questions can be pertaining to rice production. Questions can be pertaining to the Grassy Farmlands, Nuclear Bunkers, Rice Complexes, and Universities. Finally, questions can be pertaining to Mom’s Grassy “Extension”.

1. **The Rubric for Discussion Forum (10%)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Criteria** | **2** | **1** | **0** |
| **Questions answered** | **Answered the question(s)** | **Responded to a binary** | **No response** |

1. **SAPAT and GRAM Exercises (20%)**

I will explain these exercises further in the first handout.

**The Rubric for SAPAT (10%)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Criteria** | **0.25** | 1. **0. 0.25**
 | **0** |
| **Simulation Corrected** | **Simulation Done** | **Corrected** | **No Simulation Done** |

|  |  |  |  |
| --- | --- | --- | --- |
| **Criteria** | **0.25** | 1. **0. 0.25**
 | **0** |
| **Tactics Corrected** | **Tactics Done** | **Corrected** | **No Tactics Done** |

**The Rubric for GRAM Exercise (10%)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Criteria** | **0.25** | **0.25** | **0** |
| **Global Response Corrected** | **Global Response Done** | **Corrected** | **No GRAM submitted** |

|  |  |  |  |
| --- | --- | --- | --- |
| **Criteria** | **0.25** | **0.25** | **0** |
| **Mobilization Corrected** | **Mobilization Done** | **Corrected** | **No Mobilization submitted** |

**The Rubric for the JODEL PROJECT PAPER (30%)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Points | 90-100 points | 80-89 points | 70-79 points | 0-69 |
| Accuracy of Concepts (50%) | Paper shows clear understanding and application of course concepts. Background information is accurate. [50 points] | Paper shows moderate understanding and application of course concepts. Background information contains minor omissions or inaccuracies. [44.5 points] | Paper shows little to no understanding or application of course concepts. Background information contains key omissions or inaccuracies. [39.5 points] | No paper submitted or inaccurate/non-credible information [34.5 points] |
| Relevance of Post (30%) | Paper directly addresses discussion topic; prompts further discussion of topic. [30 points] | Paper is related to discussion topic. [26.7 points] | Paper makes reference to discussion topic. No clear discussion is made. [23.7 points] | No paper or irrelevant information. [20.7 points] |
| Timeliness (10%) | Paper submitted before deadline [10 points] | Paper submitted after due date but before twenty-four hours after due date. [8.9 points] | Paper submitted one day late. [7.9 points] | No paper submitted. [0 points] |
| Clarity and Organization (10%) | Paper in proper MLA format (in-text citations and bibliography). [10 points] | Paper in proper MLA format with missing in-text citations. [8.9 points] | Paper with no in-text citations with bibliography. [7.9 points] | No paper submitted. [0 points] |

**The Rubric for PESILAD (10%)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Criteria** | **10 points** | **1.25 each** | **0** |
| **PESILAD responses** | **Responses complete** | **Responses not complete****Sign = 1****Symptom = 1****Total = 8** | **No Responses** |

**The Rubric for Connecting The Concepts (10%)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Criteria** | **10 points** | **2.0 each** | **0** |
| **Connecting The Concepts responses** | **Responses complete** | **Responses not complete** | **No Responses** |

**More on the Group Project Paper**

The Farmer-Engineer will present the “JODEL” Project before the end of this course. The Farmer-Engineer will present an 8-page report. The 8-page report compromises one cover page (MLA formatted), one page for bibliography, and one full page of the “JODEL” design. The remaining five pages are for the “JODEL” concepts and applications. The first page will be used for describing the PESILAD of the patient that will be transported to a military hospital or equivalent. The second page is for describing the hazards and the controls involved for the transfer of the patient. Remember, Mom’s Grassy is “clean”. The third page will be used for describing the capabilities of your “JODEL” plane. The fourth page will be used for describing how your “JODEL” plane can be put on autopilot mode. Finally, the fifth page will be for your conclusion, including the description of how “JODEL” plane can be used for security and food production. The “JODEL” project includes the concepts for Simulations and Professional Anticipatory Tactics (SAPAT) and the concepts for Global Response and Mobilization (GRAM).

**Teaching Procedures**

This is an asynchronous course. As stated in the Learning Activities and Assessments, I will be giving out handouts on Mondays. It will contain the activities for the whole week. The activities include a weekly question prompt about concepts, which you and your binary will respond to. These discussions will be ongoing throughout the week. Working with your binary will allow interaction among the binaries that follows the behaviorist approach similar to Military Drill and Practice.

Then, there the PESILAD exercise is designed to answer “why” questions. PESILAD stands for Patient, Etiology, Signs and Symptoms, Impression, Laboratory, Ancillary, and Diagnosis. All pertinent data will be given. You and your binary will have to figure out why such data were given. This follows the cognitivist approach because you and your binary will be using data from different sources, textbooks, and other multimedia.

The “JODEL” Project is an assignment geared towards individual research. The Global Farmer-Engineer must create and submit an original eight-page report. The Global Farmer-Engineer will create the “JODEL” project, using the “JODEL” plane (GATU) as model. This activity follows the constructivist way of learning. However, this is an exception because all Project Papers are done collaboratively. The “JODEL” Project is an individual project. Your binary will give the feedback after you are done with your project.

The Simulations and Professional Anticipatory Tactics (SAPAT) exercises are another application of the Farmer-Engineers’ knowledge, in which the Global Farmer-Engineers will have to perform simulations on relevant PEMSAI concepts. Also, the Farmer-Engineers should apply professional anticipatory tactics. The Farmer-Engineers should use the Chess Cradle accordingly.

The Global Response and Mobilization (GRAM) exercises are aligned with the objectives as presented in the syllabus. The GRAM exercises allows the Farmer-Engineers to relate PEMSAI concepts to the Farmer-Engineers response to Global Emergencies. The Global Emergencies are real world situations and problems that need preparations. Use of Engineering Control, Administrative Control, and use of Personal Protective Equipment concepts are appropriate responses. Together with Connecting The Concepts, Environmental Medicine, and “Outside the Box” Concepts, global response/s can be met. With regards to mobilization, activation of command centers can be done whenever necessary.

Finally, there is Connecting The Concepts exercise. The Connecting The Concepts exercise is a critical thinking exercise. The concepts of EVOMED 101, Mom’s Grassy Chess Academy 101, APEMS 201 will be connected with the concepts of PEMSAI 201. The Global-Farmer Engineers may use the multimedia materials online. Specifically, the Farmer-Engineers can use in the Open Educational Resources available online.

 **Communication Policy**

When you contact me via e-mail, it is important that your communication be professional and appropriate. Although we are online, it is best to follow the Grassy University of Santo Tomas (**GUST**) policies.

**Course Topics**

The course will start with the continuation of the Special Senses/Sensory System. Then, these will be followed by the Cardiovascular, Respiratory, Reproductive, Immune, and the Digestive Systems. The proceeding topics will deal with Simulations and Professional Anticipatory Tactics (SAPAT), Global Response, and Mobilization (GRAM) and Artificial Intelligence.

Finally, the course will end with the Integration of EVOMED 101, Mom’s Grassy Chess Academy 101, APEMS 201 with PEMSAI 201.

**Course Schedule**

**Week of 5/26 Continuation of Special Senses/Sensory System/PESILAD—Retinal Detachment**

**Week of 6/2 Cardiovascular System/PESILAD—Myocardial Infarction**

**Week of 6/9 Respiratory System/PESILAD—Lung Cancer**

**Week of 6/16 Reproductive System/PESILAD—Normal Pregnancy and Delivery**

**Week of 6/23 Immune System/PESILAD—Measles**

**Week of 6/30 Digestive System/PESILAD--Gastroenteritis**

**Week of 7/7 Simulations and Professional Anticipatory Tactics (SAPAT)**

**Week of 7/14 Global Response and Mobilization (GRAM)**

**Week of 7/21 Artificial Intelligence/The “JODEL” Project due**

**Week of 7/28 Integration of EVOMED 101, Mom’s GRASSY Chess Academy 101, and APEMS 201 with PEMSAI 201/End of Course/Beginning of Global Applications**

Interaction Plan

Course Title: PEMSAI 201

Professor: STEM Professor Jodel Carlyle P. Deauna

E-mail: numbers115 @aol.com

This course is Asynchronous.

Electronic interactions only

The Global Farmer-Engineers are required to engage in the following interactions for successful completion of this course:

1. Answering the Discussion Forum questions.

2. Answering the CONNECTING THE CONCEPTS sentences.

3. Responding to PESILAD

4. Creating the “JODEL” Project.

5. Performing the simulations exercises and applying relevant professional anticipatory tactics.

6. Responding globally by using Engineering Control, Administrative Control, PPE, and applying the Connecting The Concepts, Evolutionary Medicine, Outside The Box concepts with mobilization.

7. Reading and studying Professor Deauna’s posts online.

8. Using EVOMED 101, Mom’s Grassy Chess Academy 101, and APEMS 201 concepts with this course and applying these concepts to Global Solutions.