Windward Community College  
Welcomes you to  

**MET 101**  
Meteorology is fun!!

Optional orientation meeting  
WCC Hale Imilo‘a (Room announced later)  

May scheduled upon request

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Optional field trip (extra credit) to the  
**National Weather Service Forecast Office**  
Date & time will be announced later.

(Updated on: August 8, 2011)

**NOTE:** To start MET 101, you MUST complete the following 3 tasks (10 points) within the first 3 weeks. They are designed to make you familiar with the procedures you need to use **Laulima**:

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**NOTE:** If you have any questions about this course, please e-mail me using my UH e-mail address (**Ikagawa@hawaii.edu**). Always include “**MET 101**” in the subject field of your e-mail, so that I will notice it immediately. This will be automatically done if you use the **Maitool** in Laulima. DO NOT use “Private Messages” in Laulima.

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1. After carefully reading this syllabus, download the **Syllabus Acceptance Form** from the Laulima Resources page, fill it up, and submit it via Assignments tool (into “Syllabus Acceptance”) by the end of the 3rd week. You can access the Resources and Assignments pages by clicking an appropriate name in the Table of Contents (**TOC**) on the left column. Without the acceptance, you are NOT allowed to participate in this course (i.e., dismissed with a failing grade). (No points assigned)

2. Access the **Discussion and Private Messages** page from **TOC**, click **Class Discussion**, and open **Introduce yourself** topic. You can
introduce yourself to the class here. Please, however, refrain from subjects that are not appropriate in public discussion. (5 points)

3. Access the **Tasks, Tests and Surveys** page from **TOC**. Open **MET 101 Presurvey** (20 questions) and answer the questions. This survey is used for a Student Learning Outcome assessment purpose only. It is NOT an exam (although it is in a test format, and not anonymous for the purpose of giving points to individuals), thus if you take it, you will receive the full credit. (5 points)

When you complete the above 3 tasks, you will receive total of 10 points. Note that your points will be posted in the **Gradebook** under “Syllabus Acceptance.” Without the submission of your syllabus acceptance, the points will not be posted.

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**Meteorology 101—** [*Introduction to Meteorology*](#)  
**03**  
Online: **Laulima** (CRN: 63104)

**INSTRUCTOR:** Toshi Ikagawa, Ph.D.  
**OFFICE:** Na‘auao 116  
**OFFICE HOURS:** Online via e-mail, TR: 12:30 p.m. – 2:30 p.m.  
**TELEPHONE:** 236-9216; ikagawa@hawaii.edu  
**EFFECTIVE DATE:** Fall 2011

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**Windward Community College** Mission Statement

*Windward Community College offers innovative programs in the arts and sciences and opportunities to gain knowledge and understanding of Hawai‘i and its unique heritage. With a special commitment to support the access and educational needs of Native Hawaiians, we provide O‘ahu’s Ko‘olau region and beyond with liberal arts, career and lifelong learning in a supportive and challenging environment — inspiring students to excellence.*

**CATALOG DESCRIPTION**

*Introduction to Meteorology* (MET 101), 3 credits. Introduction to the study of basic atmospheric physics, Sun-Earth-atmosphere-ocean-human interrelationships, major weather systems and forecasting, with special emphasis on Hawai‘i. For both science and non-science majors and prospective science teachers.

**STUDENT LEARNING OUTCOMES**
At the completion of the course the student will be able to:

1. **Describe** the components, processes and resulting weather patterns in the atmosphere.

2. **Interpret** the components of weather maps, and **forecast** weather.

3. **Apply** the scientific method and theories and concepts of meteorology (atmospheric physics) to **explain** major weather systems.

4. **Explain** critically the relationship between humans and the atmospheric environment.

**REQUIREMENTS COURSE SATISFIES:**

<table>
<thead>
<tr>
<th>At WCC:</th>
<th>Meets AA degree physical science requirement of the Natural Science requirements. Also full fill marine related elective requirement of the Marine Option Program (MOP).</th>
</tr>
</thead>
<tbody>
<tr>
<td>At UHM:</td>
<td>Meets Natural Science general education requirements (DP).</td>
</tr>
</tbody>
</table>

**PREREQUISITES**

None

**CO-REQUISITES**

None

**RECOMMENDED PREPARATION AND BASIC SKILLS**

Ability to read and write at a college level is recommended. Knowledge of college level algebra and geometry is also helpful to understand course material.

**METHOD OF INSTRUCTION**

Online ([Internet](#) & [Laulima](#))

- Useful readings prepared by Dr. Brian Richardson
  - (a) [Getting Started with Laulima](#)
  - (b) [Forwarding Your UH Mail to Another Email Account](#)

Occasionally, a rush message is disseminated via the UH e-mail. Please check your UH e-mail often.
LEARNING RESOURCES

Course package includes:


   ! Textbook is NOT online (Available at WCC Bookstore: 235-7418)


3. Access to the American Meteorological Society course homepage

Reference and Supplementary Materials

Many informative web sites are available for the subjects covered. Check the links provided in the MET 101 section of my web page:

http://www.wcc.hawaii.edu/facstaff/ikagawa-t/

COURSE TASKS

Assignments:

The AMS online course materials are accessible at:

AMS Homepage

It is assumed that you will read and complete all assigned materials.

To access the MET 101 Laulima site:

https://laulima.hawaii.edu/portal

Useful readings prepared by Dr. Brian Richardson

(a) Getting Started with Laulima
(b) Forwarding Your UH Mail to Another Email Account

For additional information, see my web site at WCC:

http://www.wcc.hawaii.edu/facstaff/ikagawa-t/
WARNING: Please do NOT share the Log-in information with a third party. Any violation of this confidentiality will lead you to dismissal from this course, at least.

ASSESSMENT TASKS AND GRADING

Evaluation:

There will be 3 exams (100 points each; total 300 points), a self-introduction/syllabus acceptance/pre-survey (10 points), and 24 Investigations (A and B for each of 12 Chapters of the textbook; 10 points each; total 240 points). With the initial 3 tasks (10 points), there are 550 total points possible (See “Grading Scale” below).

The distribution of “10 points” for each Investigation/Current Weather assignment is as follows (that is, total 20 points for each Chapter):

<table>
<thead>
<tr>
<th>Subject</th>
<th>Evaluation</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Answering questions in the Investigation Manual (online input)</td>
<td>Calculated based on the % of your correct answers</td>
<td>8 pts</td>
</tr>
<tr>
<td>Discussions on Laulima (NOTE: Total 2 entries needed)</td>
<td>Reasonable 2 entries for each investigation*</td>
<td>2 pts</td>
</tr>
<tr>
<td>Total points possible</td>
<td></td>
<td>10 pts</td>
</tr>
</tbody>
</table>

*: “Reasonable” means that a single-line comment such as “That’s great!” will not count. Use your common sense, please.

NOTE: Submission of Investigations for Chapters 13, 14 and 15 (no discussion required) are considered extra credit work (total max. 30 points; see Due dates).

ACADEMIC DISHONESTY (SERIOUS WARNING!!)

Academic dishonesty such as cheating and plagiarism that occur in this class will be severely punished. It most likely will result in immediate dismissal from the class. In other words, DON'T DO IT for any reason. It is NOT worth it.

GRADING SCALE: STANDARD SCALE
A: 90.0–100.0%, B: 80.0–89.9%; C: 70.0–79.9%, D: 60.0–69.9%, F: 0–59.9%.

For Credit/Non-Credit options, Incomplete (“I” grade), and “W” grade, see the WCC College Catalog. There is no “N” grade in this class.

**EXTRA CREDIT**: There are total of 100 points available as extra credit work for the class:

1. Extra exam (covers Ch 13-15; 25 points)
2. Post-survey (similar to the pre-survey) (15 points)
3. Investigations 13-15 (6 investigations; 5 points each; 30 points)
4. NWS visit report (30 points)

**WCC DISABILITIES ACCOMMODATION STATEMENT**

If you have a physical, sensory, health, cognitive, or mental health disability that could limit your ability to fully participate in this class, you are encouraged to contact the Disability Specialist Counselor to discuss reasonable accommodations that will help you succeed in this class. Ann Lemke can be reached at 235-7448, lemke@hawaii.edu or you may stop by Hale 'Akoakoa 213 for more information.

**ADDITIONAL INFORMATION**

Legal assumptions:

It is hereby assumed that all students will strictly follow the WCC Code of Student Conduct (see Student Affairs, *WCC Course Catalogue*). Refer to the Student Conduct Code ([http://www.hawaii.edu/apis/ep/e7/e7208.pdf](http://www.hawaii.edu/apis/ep/e7/e7208.pdf)) for the details.

**COURSE CONTENT**

**COURSE PROCEDURES**

1. **Access**: Because this is an online course, you need to be able to access

   (1) UH Laulima site: [https://laulima.hawaii.edu/portal](https://laulima.hawaii.edu/portal)

   Useful readings prepared by Dr. Brian Richardson
   (a) *Getting Started with Laulima*
(b) **Forwarding Your UH Mail to Another Email Account**

(2) AMS online course homepage: [www.ametsoc.org/amsedu/login.cfm](http://www.ametsoc.org/amsedu/login.cfm)

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**WARNING:** Please do NOT share the access information with a third party. Any violation of this confidentiality will lead you to dismissal from this course, at least.

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**NOTE:** If you have any questions about this course, please e-mail me using my UH e-mail address (Ikagawa@hawaii.edu). Always include “MET 101” in the subject field of your e-mail, so that I will notice it immediately. This will be automatically done if you use the Mailtool in Laulima. DO NOT use “Private Messages” in Laulima.

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2. **Secrets of Success:** Two key factors are especially important

(1) **Self motivation:** Because this is an online course, nobody will push you to do the work. Thus, self motivation is a key factor of success in this course.

(2) **Communication:** You are not alone. Continuous and open discussion among all participants is strongly recommended. You will use the “Questions” and “Student Lounge” pages available in the Discussions and Private Messages tool of Laulima to communicate with each other. For online investigations, group work is encouraged (i.e., help each other).

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3. **Chapter review (textbook)**

(1) Read the assigned pages of the textbook. Then study the review questions for the chapter (MS WORD format files are also available in Resources page).

To access automated reviews, from TOC, click [Tests and Quizzes](#). You see MetCh01-08 (means “Chapter 1”), MetCh02-08, etc listed.

**NOTE:** You can access Reviews as many time as you wish. However, once an exam period starts, the corresponding review page will be closed. So, be sure to review questions ahead of the exam period. (NOTE: MS WORD versions will remain available in Resources)

This table shows the chapters in the textbook, corresponding review questions, and those for exams.

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Review</th>
<th>Exam</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4. Exams (online):

(1) You will take your **3 exams** via Laulima at The Testing Center (**TTC**) on **Windward Community College** campus by the **Due Dates**.

! You can take each exam ONLY once.

**NOTE**: If necessary, you can arrange to take exams at other designated **testing sites**. Please contact the instructor to set up your testing site.

The list of locations is found at:

http://www.hawaii.edu/dl/faculty/prep/proctor_office.html

5. **Investigation Manual** (lab manual)

(1) Read the assigned pages of the textbook. Then study the assigned investigation in the Manual (A & B every week).

When you complete the investigation, enter your answers online on Laulima by the **due date**. You can access “Investigations” from **Tasks, Tests and Surveys** page.

**NOTE**: You can enter your answers only once. Be sure of your answers before submitting.

6. **Discussion** (online):
Like you did in “Introduce Yourself” exercise, post your Report (i.e. your reactions, opinions, etc.; NOT the response form) in the appropriate topic area in the Class Discussions section of Discussions and Private Messages by the due date. For example, you can report how you did it, what mistakes you made, what questions you still have, etc.

WARNING: Please do NOT share the Discussions tool with a third party. Any violation of this confidentiality will lead you to dismissal from this course, at least.

During the first 2 weeks of instruction, to familiarize yourself with the Discussions and Private Messages tool, you introduce yourself (Report). Also, comment on at least two reports (Reply).

You can seek help from your fellow students by posting your problems in the Class Discussions section. It is strongly encouraged that you help each other.

To access Class Discussions:
Log in to Laulima → Go to MET 101 page
TOC > Discussions and Private Messages Tools

The Discussions opens. Go to Class Discussion. Click on the appropriate topic and compose your message. Your report should NOT exceed 250 words.

You can add your picture, or any picture you like (of course, nothing obscene or offensive, please), in Discussion and Private Messages, My Profile. Go to "Avatar" at the bottom of the page. Please use rather small pictures.

To compose your report, an easy way is to type your report using MS Word or other word processor, and then copy and paste it in a message. Don’t forget your Name.

Also, be sure to Reply to at least one entry in the Discussions. In other words, you write your reaction to at least one person’s report. For each Investigation/Current Weather assignment, therefore, you write TWO (one report and one reply) entries. Thus, you should have at least FOUR entries in the Discussion for each Chapter (2 for A and 2 for B). Again, you are strongly encouraged to assist your fellow students.
Discussion for each chapter/investigation remains open until the due date mentioned above. Be sure to report and reply within this time period.

NOTE: If you have any questions about this course, please e-mail me using my UH e-mail address (Ikagawa@hawaii.edu). Always include “MET 101” in the subject field of your e-mail, so that I will notice it immediately. This will be automatically done if you use the Mailtool in Laulima. DO NOT use “Private Messages” in Laulima.

COURSE CONTENT OF EACH TOPIC

Investigations Listing

<table>
<thead>
<tr>
<th>1A: Air Pressure and Wind</th>
<th>1B: Surface Air Pressure Patterns</th>
</tr>
</thead>
<tbody>
<tr>
<td>2A: Surface Weather Maps</td>
<td>2B: The Atmosphere in the Vertical</td>
</tr>
<tr>
<td>3A: Weather Satellite Imagery</td>
<td>3B: Sunlight Throughout the Year</td>
</tr>
<tr>
<td>4A: Temperature and Air Mass Advection</td>
<td>4B: Heating Degree-Days and Wind Chill</td>
</tr>
<tr>
<td>5A: Air Pressure Change</td>
<td>5B: Air Pressure in the Vertical</td>
</tr>
<tr>
<td>6A: Clouds, Temperature, and Air Pressure</td>
<td>6B: Rising and Sinking Air</td>
</tr>
<tr>
<td>7A: Precipitation Patterns</td>
<td>7B: Doppler Radar</td>
</tr>
<tr>
<td>8A: Surface Weather Maps and Forces</td>
<td>8B: Upper-Air Weather Maps</td>
</tr>
<tr>
<td>9A: Westerlies and the Jet Stream</td>
<td>9B: ¡El Niño!</td>
</tr>
<tr>
<td>10A: The Extra-Tropical Cyclone</td>
<td>10B: Extra-Tropical Cyclone Track Weather</td>
</tr>
<tr>
<td>11A: Thunderstorms</td>
<td>11B: Tornadoes</td>
</tr>
<tr>
<td>12A: Hurricanes</td>
<td>12B: Hurricane Wind Speeds and Pressure Changes</td>
</tr>
<tr>
<td>13A: Weather Instruments and Observations</td>
<td>13B: Weather Forecasts</td>
</tr>
<tr>
<td>14A: Optical Phenomena</td>
<td>14B: Atmospheric Refraction</td>
</tr>
<tr>
<td>15A: Visualizing Climate</td>
<td>15B: Local Climatic Data</td>
</tr>
<tr>
<td>Requirement</td>
<td>Due Date</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>Self introduction &amp; Pre-survey</td>
<td>3rd week at <strong>WCC</strong></td>
</tr>
<tr>
<td>Syllabus acceptance</td>
<td>3rd week</td>
</tr>
<tr>
<td>Investigations</td>
<td></td>
</tr>
<tr>
<td>Answers (A &amp; B)</td>
<td><strong>Saturday evening</strong>, every week (check due dates online in the Tasks, Tests &amp; Surveys page)</td>
</tr>
<tr>
<td>Discussions</td>
<td>Same as the above</td>
</tr>
<tr>
<td>Exam</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>8th-9th week (Ends on Friday)</td>
</tr>
<tr>
<td>2</td>
<td>12th-13th week (Ends on Friday)</td>
</tr>
<tr>
<td>3</td>
<td>15th-16th week (Ends on Friday)</td>
</tr>
<tr>
<td>All Extra Credit Assignments</td>
<td>16th week (Last Day of Instruction)</td>
</tr>
</tbody>
</table>

For exact dates and time, check the Calendar on Laulima.

! **Nothing will be accepted after the designated due dates.**

! **Testing Centers may not be open on the due dates!**

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