Course Syllabus

Textbook: Dally, J.W., et al. *Introduction to Engineering Design: Engineering Skills and Hovercraft Missions, Book 9.* 7th ed. Knoxville: College House Enterprises, 2014. e-book.
website: http://ter.ps/ENES100book   password: enes100S14#   expr: May 31, 2014

The purchase of all course materials at the Engineering Copy Center (EGR 1123) is a course requirement. These materials include access to the e-book version of the textbook and one Arduino Sidekick.

Course Website: myelms.umd.edu   *ENES 100: Portal Spring 2014*

Section	Instructor	Teaching Fellow	Class Time	Room
0101	Valente, E.	Laurenzano, N.	MW 10- 11:50	JMP 1116
0102	Lopez Roshwalb, J.	Sullivan, D.	MW 10- 11:50	JMP 1215
0201	Syrmos, G.	Hammer, C.	TuTh 10- 11:50	JMP 1116
0301	Valente, E.	Peck, Z.	MW 12- 1:50	JMP 1116
0302A	Lawson, W.	Free, B.	MW 12- 1:50	JMP 1215
0401	Kamakaris, S.	Frantz, M.	TuTh 12- 1:50	JMP 1116
0501	Davis, C.	Mazurick, R.	MW 2- 3:50	JMP 1116
0502	Valente, E.	Lundh, J.	MW 2- 3:50	JMP 1215
0601	Lopez Roshwalb, J.	Beaudoin, J.	TuTh 2- 3:50	JMP 1116
0602	Gupta, A.	Secules, S.	TuTh 2- 3:50	JMP 1215
0701	Kofinas, P.	Kramer, B.	MW 4- 5:50	JMP 1116
0702	Wagman, N.	Topelius, M.	MW 4:30- 6:20	JMP 1215

Office Hour Schedule
Students may visit ANY of the instructors or TF's regardless of assigned section

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
9-10		Davis	Syrmos, Lopez Roshwalb	Davis	Syrmos, Lopez Roshwalb	Kramer, Valente
10-11		Davis, Free, Lawson	Kamakaris	Davis, Free, Lawson	Kamakaris	Sullivan, Valente
11-12			Kamakaris		Kamakaris	Peck, Sullivan, Valente
12-1		Lopez Roshwalb	Hammer	Lopez Roshwalb		Sullivan, Topelius
1-2		Secules		Kofinas		Valente
2-3		Gupta, Secules				Valente
3-4						Topelius, Valente
4-5	Lundh, Tennyson	Davis		Davis		Topelius, Hammer
5-6	Bahnsen, Lundh					
6-7	Lundh, Sepelyak	Beaudoin, Kramer, Wagman (at 6:20)		Wagman (at 6:20)		
7-8	Frantz, Hammer, Huang	Beaudoin, Kramer, Wagman (to 7:20)	Laurenzano, Mazurick	Wagman (to 7:20)	Free	
8-9	Frantz, Peck	Beaudoin	Laurenzano, Mazurick		Free	
9-10	Frantz, Peck		Laurenzano, Mazurick			

(Sun., Mon., Tues., and Thurs., evening office hours located in the Keystone Center – JMP 1116)

Instructors: Dr. Christopher Davis: KIM 2124, davis@umd.edu, 301-405-3637
        Dr. Ayush Gupta: PHY 1320, ayush@umd.edu, 301-405-5445
        Mr. Stephen Kamakaris: JMP 2108, skamakar@umd.edu, 301-405-5569
        Dr. Peter Kofinas: KIM 1120, kofinas@umd.edu, 301-405-7335
        Dr. Wesley Lawson: AVW 2325, lawson@umd.edu, 301-405-4972
        Ms. Jackelyn Lopez Roshwalb: JMP 2108, roshwalb@umd.edu, 301-405-6160
        Dr. George Syrmos: JMP 2105, syrmos@umd.edu, 301-405-3633
        Mr. Evandro Valente: JMP 2108, egv@umd.edu, 301-405-5588
        Mr. Nicholas Wagman: JMP 2104, nwagman@umd.edu, 410-962-4562

TF's: Ms. Judy Beaudoin: JMP 2102, jbeaudoi@terpmail.umd.edu
        Mr. Maximilian Frantz: JMP 2102, maxfrantz@gmail.com
        Mr. Brian Free: JMP 2102, bfree@umd.edu
        Mr. Caleb Hammer: JMP 2102, chammer7@terpmail.umd.edu
        Mr. Bernie Kramer: JMP 2102, bernieskramer@gmail.com
        Mr. Paul "Nick" Laurenzano: JMP 2102, pnlaure@umd.edu
        Mr. James Lundh: JMP 2102, jsl5-23-93@hotmail.com
        Mr. Ryan Mazurick: JMP 2102, mazurick@umd.edu
        Mr. Zachary Peck: JMP 2102, zpeck@terpmail.umd.edu
        Mr. Daniel Sullivan: JMP 2102, dsulliva@terpmail.umd.edu
        Mr. Stephen Secules: JMP 2102, secules@umd.edu
        Mr. Matthew Topelius: JMP 2102, matttopelius@gmail.com

Lab TF's: Mr. Matthew Bahnsen: JMP 2102, mbahnsen@terpmail.umd.edu
        Ms. Paula Huang: JMP 2102, paula.h.36@gmail.com
        Mr. Platon Lukyanenko: JMP 2102, plukyane@umd.edu
        Mr. Christopher Sepelyak: JMP 2102, csep@umd.edu
        Mr. Nathan Tennyson: JMP 2102, ntennyso@terpmail.umd.edu

COURSE OBJECTIVES

This course provides the new engineering student with the answer to one very basic question: What does it mean to be an engineer? This question is answered in this course (and in later courses throughout your curriculum) by focusing on six fundamental engineering topics:

    1. Teamwork and group dynamics
    2. Communication skills – oral, written, graphical
    3. Computer applications
    4. Scientific and technical principles
    5. Analysis of experimental data
    6. Ethics

This course introduces students to the engineering experience through the planning, investigation, design, manufacturing, assembly, and evaluation of a product. These functions are achieved within the context of a team setting. You will be assigned to a team, and each team will be required to prepare reports and presentations on a product design, to build a working prototype of the product, and to summarize the design process and product performance. You will also be responsible for evaluating your performance and that of your teammates. Working successfully in teams and developing an understanding of group dynamics are important course objectives. During the course of the semester you will also learn some basic science and engineering principles and their application to the project at hand. You will develop your computer skills, including use of the Internet, and use of basic spreadsheet, word processor, and graphical presentation software to assist in product design and development. Additional objectives include learning about the role engineers play in our modern society and engineering ethics. Finally, throughout the course, there will be opportunities to develop and improve your communication skills, including oral, written, and visual (engineering drawing) modalities.

GRADING POLICY

Individual Grades

Individual Contribution to Team / Participation	20%
Homework	10%
Canvas Quizzes	5%
In-class Quizzes	15%
Subtotal	**50%**

Team Grades

MS 1: Product Development Plan Consultation	5%
MS 2: Preliminary Design Presentation	5%
MS 3: Preliminary Design Report	10%
MS 4: Prototype Fabrication Start	4%
MS 5: Systems Testing	4%
MS 6: Systems Integration	4%
MS 7: Navigation Testing	3%
MS 8: ENES 100 Competition	-
MS 9: Final Design Presentation	5%
MS 10: Final Design Report	10%
Subtotal	**50%**

Total	**100%**

Additional points may be assigned to individuals for exceptional effort and performance. Likewise, little or no points may be assigned to students who do not actively participate in the completion of team assignments.

COURSE POLICIES

Academic Integrity

The University of Maryland, College Park has a nationally recognized Code of Academic Integrity, administered by the Student Honor Council. This Code sets standards for academic integrity at Maryland for all undergraduate and graduate students. As a student you are responsible for upholding these standards for this course. It is very important for you to be aware of the consequences of cheating, fabrication, facilitation, and plagiarism. For more information on the Code of Academic Integrity or the Student Honor Council, please visit http://www.shc.umd.edu.

To further exhibit your commitment to academic integrity, remember to sign the Honor Pledge on all examinations: "I pledge on my honor that I have not given or received any unauthorized assistance on this examination."

Participation

Regular attendance and participation in this class is expected. Class sessions will be used for lectures, demonstrations, team meetings, and team building activities. If you miss class you are responsible for all information covered that day. In the event that a class must be missed due to an illness, the policy in this class is as follows:
1. For every medically necessary absence from class, a reasonable effort should be made to notify the instructor in advance of the class. When returning to class, students must bring a note identifying the date of and reason for the absence.
2. If you are absent more than 2 times, your instructor may require documentation signed by a health care professional.
3. If you are absent on a day when a test or other major assignment is due, you must notify your instructor in advance. Upon returning to class, you must bring documentation of the illness signed by a health care professional.

Flipped Classroom / Canvas Quizzes

This course is structured such that the first half of the semester is grounded in engineering content, and the second half is lab-based. ENES100 uses a flipped classroom model for the first six weeks, which takes one hour of lecture a week from a large lecture format and replaces it with approximately one hour of video lecture a week that students watch on their own time. The six online lecture videos are available through the Canvas Portal, and six corresponding online quizzes will be posted to ensure your comprehension of each week's material. Each week's quiz must be completed by 11:59PM on the following Sunday night. Your final Canvas Quiz grade will be determined by dropping your lowest quiz score and averaging the remaining quiz scores.

Additionally, there are four required special lectures throughout the semester that take place outside of class time. These are presented by guest lecturers, and the topics include Product Development, Modern Engineering Trends, Globalization, and Product Liability and Ethics.

In-class Quizzes

In lieu of a midterm examination, at least 4 quizzes will be administered throughout the semester during the recitation sessions. Additional quizzes beyond those identified on the course schedule may be given if your instructor deems it appropriate. You will be given 15 minutes to complete each quiz. Your final quiz grade will be determined by dropping your lowest quiz score and averaging the remaining quiz scores. No make-up quizzes will be administered. In the event the University dismisses classes on a day in which a quiz is scheduled, then the quiz will be given during the very next class session. Any requests for re-grading must be submitted in writing within two weeks of the assignment deadline.

Homework

Homework assignments are due at the beginning of the class period on the date due. Late homework will not be accepted, except in the case of unusual circumstances with submission of sufficient documentary evidence. Under no circumstance will late homework be accepted unless given pre-approval.

Guidelines for Homework:
Problem solution format is exceedingly important for developing good engineering skills. Each homework problem solution should have the following components:

1) *Basic Format:* Each problem should be started on a clean sheet of paper. You are not being graded on how little paper you can use or how small you can write! Use good quality paper, such as engineering graph paper or college-ruled paper, with NO spiral edges. Write in pencil on only one side of the paper. All pages should be stapled together and include your name, homework number, section number, and page number (e.g. 1/3 means 1 of 3) on each sheet. Work should be neat and easily legible. We reserve the option to return work ungraded if it does not meet these basic requirements.

2) *Problem statement:* A concise (re)statement of the problem should be given. It is not necessary to restate verbatim the problem question from the text, but enough detail is needed to define the problem, make clear what quantities are given, and what is being sought for the solution. Clearly list any additional assumptions not given in the problem statement (if necessary).

3) *Diagrams:* A diagram indicating the coordinate axes should be given, and equations should be applied consistently using the convention indicated in your diagram. All symbols need to be defined, including those given as initial conditions in the problem statement or new ones that are needed for the problem solution. A free body diagram must be included when appropriate. You may need more than a single figure for more complicated problems.

4) *Algebraic solution:* Start by stating the general equations you plan to use for the solution, which should also clearly relate to your stated known and unknown variables listed in steps (2) to (4). An algebraic solution of the problem (e.g. in symbolic format, no numbers plugged in) should be given whenever possible, with enough steps provided for someone to logically follow your work. Numbers should be plugged in to the algebraic solution at the end with appropriate units. Show all work required to obtain your solution (e.g. no work means no credit will be given).

5) *Numerical answer:* After substituting the numerical values into the algebraic solution, you should calculate and state the final numerical answer. Appropriate significant figures should be used (i.e. if your given variables only have 4 significant digits, your final solution should not have more than that). Your calculator can probably give you 14 significant digits when dividing irrational numbers, but this does not mean you have the appropriate precision to report that many. The final answer must be boxed so that it can be easily identified.

6) *Final units:* You should include correct units on the final answer. This should follow consistently from the algebraic solution in step (5), and not simply appear with the final answer because you know what the units "should" be.

   We expect to see all of the above components in every solution. At this stage in your development as an engineer, the problem-solving procedure is much more important than the numerical answer and problems will be graded accordingly. If the above guidelines are not followed, your TF will either reject the assignment outright, for extreme cases, or deduct points for items that do not conform to the specifications.

Team Logs

After you form your teams, each team will be required to keep a record of their meetings. This record can either be in the form of a notebook or a web based log (blog). Each log is intended to document the team's experience. Logs must include the names of the team members present at each meeting, their role on the team, minutes from the meeting, a list of action items (including who is responsible), and an update of what action items were accomplished from previous meetings (including who did the work).

The logs will provide a record of the team's progress on the design, manufacturing and testing of the product. This is the team's documentation of the time and effort spent on the project. Teams must bring their logs to each class and/or update a web-based blog prior to the start of class. Logs may be collected/viewed periodically with little or no forewarning. Note: if the team divides into subgroups, the subgroups should maintain separate notes, to be integrated into the main team log.

Peer Evaluations

No fewer than two peer evaluations will be given during the semester. The results will be summarized and made available to each individual student. The result of this evaluation, the recommendation of the Teaching Fellow, the instructor's personal discretion, and information from the team logs will be used to determine the "Individual Contribution to Team" grade.

Financial Requirements

Each student will make a financial contribution to cover the costs of the design project. The total cost for final assembly of the team project must be less than or equal to $350 and must be shared equally among team members. In order to establish the cost of your product, each team will be asked to produce receipts for materials and services used in the production of their project. As a suggestion, collect fees as early as possible to minimize the chance of forfeiting income in the event of a team member dropping the course.

Arduino Kit Rentals

At home and in-class assignments and activities will utilize the Arduino microcontroller. The Keystone Program will rent an Arduino board and USB cable to each student for use during the semester. You are not required to rent an Arduino and cable if you have your own already, have access to a more advanced kit through some other means (for example, the ECE Department will loan a kit to their students for use during their first year), or plan to purchase a kit from another source. Upon the return of **both** components in working condition and in the original packaging, your loan agreement will be fulfilled. If the components are not fully functioning and/or cannot be returned, you will be required to purchase them at cost ($25). You will also have the option to purchase the Arduino and cable at any point in the semester if you wish to keep it. All Arduino returns and purchases must be completed before May 2, 2014.

Assembly Room

Students must complete web-based safety training before they will be allowed to enter the assembly room. While in the assembly room, you will be permitted to sign out toolboxes and specialty tools using your student ID. You are responsible for the tool(s) that you check out. If you return a toolbox that is missing tools or if you maliciously break a tool, you will be charged for the replacement costs. You are responsible for cleaning up after yourself. Failure to do so will result in loss of assembly room use.

Keystone Center

The Keystone Center will be open throughout the semester on Sunday evenings from 4-10 PM and Monday/Tuesday/Thursday evenings from 7-10 PM in JMP 1116 (overflow in JMP 1215). This is a place where you can go to work on homework, to use the computer labs, or to study for exams. It will be staffed at all times with upper level undergraduate students that can provide assistance in answering questions in ENES 100, 102, 220, 221, 232 and BIOE 120. The Keystone Center will be closed during Spring Break (March 15 - 23), final exams week (after May 13), and any other times the university closes. Please refer to this syllabus and any updated office hour schedules posted on your course website to ensure that someone proficient in your specific course will be available during your visit.

Accommodations

Religious observances: Students shall be given an opportunity whenever feasible to make up in a reasonable time any academic assignment that is missed due to individual participation in religious observances. It is the student's responsibility to inform the instructor of any intended absences for religious observances *no later than February 7, 2014.*

Disabilities: The University has a legal obligation to provide appropriate accommodations for students with disabilities. If you have a university registered special need related to a disability, please inform the instructor *no later than February 7, 2014* to arrange accommodations.

Academic Assistance

If you are experiencing difficulties in keeping up with the demands of your classes and schedule, contact the Learning Assistance Services, 2202 Shoemaker Building, 301-314-7651, or on the web at http://www.counseling.umd.edu/LAS/. Their educational counselors can help with time management, reading, note taking, and exam preparation skills.

CourseEvalUM

Your participation in the evaluation of courses through CourseEvalUM is a responsibility you hold as a student member of our academic community. Your feedback is confidential and important to the improvement of teaching and learning at the University as well as to the tenure and promotion process. CourseEvalUM will open for you to complete your evaluations later this semester. Please go directly to the website (www.courseevalum.umd.edu) to complete your evaluations. By completing all of your evaluations each semester, you will have the privilege of accessing online, at Testudo, the evaluation reports for the thousands of courses for which 70% or more students submitted their evaluations.

Courtesies

You can help make the classroom conducive to learning if you:
1. Arrive for class on time
2. Do not prepare to leave until the instructor indicates the lecture is over
3. Silence your cell phone
4. Do not eat or drink in the labs

Syllabus Addendum

I am adding a course focus on sustainability, that is emerging as a core disciplinary idea within engineering science and design. Applied to engineering design, sustainability can refer to understanding the social, environmental, and economic impact of your design and using that understanding to optimize your design towards more responsible production and use. As part of this, I will be discussing some sustainability ideas, as it applies to the OSV project, in class. In addition, I am adding some bonus objectives to the class deliverables.

Bonus objective for Prelimimary Design Report

In a single page addendum to your report, discuss how you attend to sustainability issues in your preliminary design decisions. Your report should articulate how you are conceptualizing sustainability as applied to your specific design, what aspects of sustainability you are attending to, and how that is driving the decisions your team is making. This could involve discussing sustainability considerations that drive particular design decisions and/or the design process and/or particular practices during the build/test phase of your design

The total percent bonus credit for this part is 10% of your report. The grading for this portion will be done based on whether your addendum qualifies as "unsatisfactory," "satisfactory," "good," or "excellent".

Bonus objective for Final Design Report

In a single page addendum to your report, discuss how you incorporated sustainability issues in your final design and throughout your design process. Your report should articulate how you are conceptualizing sustainability as applied to your specific design, what aspects of sustainability you are attended to, and how that influenced your specific design decisions at various points in the semester.

The total percent bonus credit for this part is 10% of your report. The grading for this portion will be done based on whether your addendum qualifies as "unsatisfactory," "satisfactory," "good," or "excellent".

Proposed Schedule of Topics

Week	Day	Topic	Reading Due Dates	Assignment Due Dates
Week 1	**Mon/Tues**	Introduction / Objectives / Product Specifications	Chapter 1	
1/27 – 1/31	**Wednesday**	**SPECIAL:** Product Development – Aris Cleanthous • 6:00-6:50PM, located in **BRB 1101** • 7:00-7:50PM, located in **BRB 1101**		You must attend **either** one-hour session.
	Wed/Thurs	Teamwork and Leadership / Introduction to CAD	Chapter 2	
Flipped content: Design and Levitation			Canvas quiz due Sunday, 2/2 by 11:59pm	
Week 2	**Mon/Tues**	Fluid Mechanics Discussion / Project Org. and Management	Chapters 3-4	PS1
2/3 – 2/7	**Wed/Thurs**	Technical Drawings / Introduction to Arduino Programming	Chapters 8-9	
Flipped content: Fan selection and propulsion			Canvas quiz due Sunday, 2/9 by 11:59pm	
Week 3	**Mon/Tues**	Fan Selection and Propulsion Discussion • Lab Demo: Fans + Testing		PS 2
2/10 – 2/14	**Wed/Thurs**	Benchmarking / Technical Communication • Lab Activity: Build a Hovercraft	Chapters 11-12	
	Friday	Optional Workshop 1: Practical Introduction to Lab Equipment and Techniques		
Flipped content: Electronics Part I			Canvas quiz due Sunday, 2/16 by 11:59pm	
Week 4	**Mon/Tues**	Electronics Part I Discussion Arduino: Voltage Divider + Sensor Theory	Chapters 5-6	PS 3
2/17 – 2/21	**Wed/Thurs**	Circuit Analysis Arduino: Advanced Sensors		
	Friday	Optional Workshop 2: Review Week 1 of Electronics + Arduino		
Flipped content: Electronics Part II			Canvas quiz due Sunday, 2/23 by 11:59pm	
Week 5	**Mon/Tues**	*Quiz 1– Fluid Mechanics + Fan Selection and Propulsion* Electronics Part II Discussion		PS 4
2/24 – 2/28	**Wed/Thurs**	Arduino: Outputs + Transistors		
	Friday	Optional Workshop 3: Review Week 2 of Electronics + Arduino		MS 1
Flipped content: Hovercraft Dynamics			Canvas quiz due Sunday, 3/2 by 11:59pm	
Week 6	**Mon/Tues**	Arduino: Tanks		PS 5
3/3 – 3/7	**Wed/Thurs**	*Quiz 2 – Electronics* Hovercraft Dynamics Discussion	Chapter 7	
Flipped content: Hovercraft Control			Canvas quiz due Sunday, 3/9 by 11:59pm	
Week 7	**Mon/Tues**	*Quiz 3 – Arduino Programming Practical* Hovercraft Controls Discussion	Chapter 6	PS 6
3/10 – 3/14	**Wed/Thurs**	Milestone 2 – Preliminary Design Presentations		MS2
	Friday	Milestone 3 – Preliminary Design Reports		MS3
Week 8 3/17 – 3/21		SPRING BREAK		
Week 9	**Mon/Tues**	*Quiz 4 – Dynamics and Controls* Milestone 4 – Fabrication Start		MS4
3/24 – 3/28	**Wed/Thurs**	Prototype Fabrication and Testing		
	Friday	Open Lab hours from 9-5		
		SPECIAL: Modern Engineering Trends The list of speakers will become available later in the semester • 4:00-4:50PM, Wednesday 3/26, PHYS 1410 • 5:00-5:50PM, Thursday 3/27, PHYS 1412 • 6:00-6:50PM, Thursday 3/27, PHYS 1412 • 4:00-4:50PM, Friday 3/28, PHYS 1412		You must attend **one** of the one-hour sessions.

Week 10 3/31 – 4/4	Mon/Tues	Prototype Fabrication and Testing		
	Wednesday	**SPECIAL:** Globalization – Sheryl Ehrman • 6:00-6:50PM, located in **BRB 1101** • 7:00-7:50PM, located in **BRB 1101**		You must attend **either** one-hour session.
	Wed/Thurs	Milestone 5A – Levitation Milestone 5B – Preliminary Sensors and Controls		MS5: A+B
	Friday	Open Lab hours from 9-5		
Week 11	Monday + Wednesday	**SPECIAL**: Product Liability & Ethics – Brannigan & Beier • Monday, 4:00-4:50PM, located in **PHY 1412** • Wednesday, 4:00-4:50PM, located in **PHY 1412**		You must attend **either** one-hour session.
4/7 – 4/11	Mon/Tues	Prototype Fabrication and Testing		
	Wed/Thurs	Milestone 5C – Propulsion Milestone 5D – Batteries		MS5: C+D
	Friday	Open Lab hours from 9-5		
Week 12 4/14 – 4/18	Mon/Tues	Milestone 5E – Payload Proof of Concept		MS5: E
	Wed/Thurs	Prototype Fabrication and Testing		
	Friday	Open Lab hours from 9-5		
Week 13 4/21 – 4/25	Mon/Tues	Milestone 6 – Systems Integration		MS6
	Wed/Thurs	Prototype Fabrication and Testing		
	Friday	Open Lab hours from 9-5		
Week 14 4/28 – 5/2	Mon/Tues	Prototype Fabrication and Testing		
	Wed/Thurs	Prototype Fabrication and Testing		
	Friday	Open Lab hours from 9-5		
Week 15 5/5 – 5/9	Mon/Tues	Milestone 7 – Navigation		MS7
	Wed/Thurs	Prototype Fabrication and Testing		
	Friday	Open Lab hours from 9-5		
Week 16 5/12 – 5/16	Monday	Prototype Testing in Kim Engineering Building Rotunda		
	Tuesday	**Milestone 8 – ENES 100 Competition** • Kim Engineering Building Rotunda, 9:00am- 5:00pm		MS8
	Thurs/Fri	Milestone 9 – Final Design Presentations (see below) Milestone 10 – Final Design Reports		MS9, MS10
Week 17	Mon-Wed	Milestone 9 – Final Design Presentations (see below) Milestone 10 – Final Design Reports		MS9, MS10

FINAL DESIGN PRESENTATION SCHEDULE				
Section	**Day**	**Date**	**Time**	**Location**
0101	Wednesday	21-May	8:00AM- 10:00AM	JMP1116
0102	Wednesday	21-May	8:00AM- 10:00AM	JMP1215
0201	Thursday	15-May	8:00AM- 10:00AM	JMP1116
0301	Friday	16-May	1:30PM- 3:30PM	JMP1116
0302	Friday	16-May	1:30PM- 3:30PM	JMP1215
0401	Tuesday	20-May	1:30PM- 3:30PM	JMP1116
0501	Monday	19-May	1:30PM- 3:30PM	JMP1116
0502	Monday	19-May	1:30PM- 3:30PM	JMP1215
0601	Monday	19-May	10:30AM- 12:30PM	JMP1116
0602	Monday	19-May	10:30AM- 12:30PM	JMP1215
0701	Monday	19-May	4:00PM- 6:00PM	JMP1116
0702	Monday	19-May	4:00PM- 6:00PM	JMP1215