Los Alamos Dynamics Summer School  
June 9-August 8, 2014
Los Alamos Research Park (TA-03, Bldg. 4200)  
Suite 100, Room 101 (Access Grid) + Work Areas

Student Projects
IMAC Abstracts-Due June 13, 2014  
Student Presentation Drafts I- June 25, 2014  
Student Presentation Drafts II - July 16, 2014  
Student Presentation Drafts III - July 25, 2014  
Student Final Presentations-Due August 6&7, 2014

-UNCLASSIFIED-

Week 1 June 9-13  
Student Orientation  
GET Training and Pizza Dinner  
Administrative and Training Details  
Tutorials-Probability & Statistics, Matlab  
Lecture-Structural Health Monitoring

Week 2 June 16-20  
Tutorials-Modeling Dynamics Systems- 
Pete Avitabile and DJ Luscher  
Matlab-Dustin Harvey  
Guest Lectures:  
Accelerator Controls-Alex Scheinker  
Thinking Telescopes-James Wren

Week 3 June 23-27  
Tutorials-Signal Processing-Eric Flynn  
Guest Lectures:  
Cyber-Physical Systems-Dan Lofaro  
LANL Satellite Work-Ed Fenimore

Week 4 June 30-July 4  
Tutorials-System Identification- 
Guest Lectures:  
Sensor Node Development-Stuart Taylor

Week 5 July 7-11  
Tutorials-Controls-Alex Scheneker  
Field Trip-Sandia Natl. Laboratory  
Guest Lecture:  
Cyber-Physical Systems-Scott Backhaus

Week 6 July 14-18  
Tutorials-Embedded Systems-Bill Hodgkiss  
Guest Lectures:  
Computational Sciences-Francois Hemez  
Power Wall Tour-Metropolis Center

Week 7 July 21-25  
Tutorials-Nonlinear Systems-Mike Todd  
Guest Lectures:  
Doug Adams  
Aerospace Systems-Nick Lieven

Week 8 July 28-Aug  
Tutorials-Machine Learning-TBD  
Guest Lectures:  
Smart Materials-Steven Anton  
TBD

Week 9 August 4-8  
Practice Sessions  
Presentations  
Departure Processing  
Lab Clean Up  
Wrap Up
Week 1, June 9-13, 2014

Monday, June 9, 2014

Orientation 03/4200/203 A & B

07:30 – 08:30 Badging-Students
08:30 – 08:45 Lunch Selection, Money Collection-All
08:45 – 09:15 Welcome-Steve Girrens, ADE
09:15 – 10:00 How to Get the Most from Your Internship-Carol Hogsett, ADIT
10:00 – 10:10 LA Chamber of Commerce Presentation-Kathy Korkos, LA Chamber of Commerce
10:10 – 10:20 Student Worker Safety & Security Team-Micayela Martinez, SWSST Chairperson
10:20 – 10:30 Break
10:30 – 10:50 Taxation of Fellowships-Mike Cunningham, TPT
10:50 – 11:10 You and Your Safety-Alan Gibson, Deployed Services, HIS-IS
11:10 – 11:20 Security-Janelle Armendariz, Deployed Services, SEO-4
11:20 – 11:30 Break, Distribute Lunches
11:30 – 01:00 Lunch/Speaker: Adventure in Northern New Mexico and Beyond-Bill Priedhorsky, SRO
01:00 – 02:30 Introduction to the 15th LADSS-David Mascareñas, EI
02:30 – 03:30 Break, Meet with Mentors
03:30 – 05:00 Proceed to Labs, Lab Inspections-Bruce Dahlquist, DESH-UIMS

Tuesday
08:00 – 04:00 GET Training - White Rock
06:00-08:00 Pizza at Francois’

Wednesday
08:00 – 09:00 Administrative and Training Updates 101 Axis Grid
09:15 – 01:00 Begin Projects
01:00 – 02:30 Probability & Statistics I (Chuck Farrar) 101 Axis Grid

Thursday
08:00 – 09:30 Probability & Statistics II (Chuck Farrar) 101 Axis Grid
03:30 - 05:00 Lecture: Structural Health Monitoring (Chuck Farrar) 101 Axis Grid

Friday
05:00 IMAC Abstracts Due
### Week 2, June 16-20, 2014 - all lectures and tutorials are in 03/4200/101

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<thead>
<tr>
<th>Monday</th>
<th>Time</th>
<th>Course</th>
<th>Instructors</th>
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<tbody>
<tr>
<td></td>
<td>08:00 – 09:30</td>
<td>Modeling Dynamics Systems I</td>
<td>Pete Avitabile and DJ Luscher</td>
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<td>01:00 – 02:30</td>
<td>Modeling Dynamics Systems II</td>
<td>Pete Avitabile and DJ Luscher</td>
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<tr>
<td>Tuesday</td>
<td>08:00 – 09:30</td>
<td>Modeling Dynamics Systems III</td>
<td>Pete Avitabile and DJ Luscher</td>
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<td>03:30–05:00</td>
<td>Accelerator Controls</td>
<td>Alex Scheinker</td>
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<tr>
<td>Wednesday</td>
<td>08:00 – 09:30</td>
<td>Matlab Introductory</td>
<td>Dustin Harvey</td>
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<td>01:00 – 02:30</td>
<td>Matlab Advanced</td>
<td>Dustin Harvey</td>
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<tr>
<td>Thursday</td>
<td>08:00 – 09:30</td>
<td>Modeling Dynamics Systems IV</td>
<td>Pete Avitabile and DJ Luscher</td>
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<td>03:30 - 05:00</td>
<td>Lecture: Thinking Telescopes</td>
<td>James Wren</td>
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<td>Friday</td>
<td>08:00 – 09:30</td>
<td>Modeling Dynamics Systems V</td>
<td>Pete Avitabile and DJ Luscher</td>
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### Week 3, June 23-27, 2014 - all lectures and tutorials are in 03/4200/101

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<tr>
<td></td>
<td>08:00 – 09:30</td>
<td>Signal Processing I</td>
<td>Eric Flynn</td>
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<tr>
<td>Tuesday</td>
<td>08:00 – 09:30</td>
<td>Signal Processing II</td>
<td>Eric Flynn</td>
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<td>03:30–05:00</td>
<td>Controls</td>
<td>Dan Lofaro</td>
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<tr>
<td>Wednesday</td>
<td>08:00 – 09:30</td>
<td>Signal Processing III</td>
<td>Eric Flynn</td>
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<td>03:00 – 05:00</td>
<td>Student Presentations I</td>
<td>Students, Mentors</td>
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<tr>
<td>Thursday</td>
<td>08:00 – 09:30</td>
<td>Signal Processing IV</td>
<td>Eric Flynn</td>
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<tr>
<td>Friday</td>
<td>08:00 – 09:30</td>
<td>Signal Processing V</td>
<td>Eric Flynn</td>
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<td>03:30 – 05:00</td>
<td>LANL Satellite Work</td>
<td>Ed Fenimore</td>
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### Week 4 June 30-July 4, 2014 - all lectures and tutorials are in 03/4200/101

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<tr>
<td></td>
<td>08:00 – 09:30</td>
<td>System Identification I</td>
<td>Flynn, Scheinker, Harvey</td>
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<tr>
<td>Tuesday</td>
<td>08:00 – 09:30</td>
<td>System Identification II</td>
<td>Flynn, Scheinker, Harvey</td>
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<td>03:30–05:00</td>
<td>Lecture: Sensor Node Development</td>
<td>Stuart Taylor</td>
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<td>Wednesday</td>
<td>08:00 – 09:30</td>
<td>System Identification III</td>
<td>Flynn, Scheinker, Harvey</td>
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<tr>
<td>Thursday</td>
<td>08:00 – 09:30</td>
<td>System Identification IV</td>
<td>Flynn, Scheinker, Harvey</td>
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<tr>
<td>Friday</td>
<td>08:00 – 09:30</td>
<td>Holiday</td>
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**Week 5 July 7-11, 2014** - all lectures and tutorials are in 03/4200/101

**Monday**
08:00 – 09:30 Controls I (Alex Schienker)

**Tuesday**
08:00 – 09:30 Controls II (Alex Schienker)
03:30-05:00 Electric Grid (Scott Backhaus)

**Wednesday**
08:00 – 09:30 Controls III (Alex Schienker)

**Thursday**
08:00 – 09:30 Controls IV (Alex Schienker)

**Friday**
07:00 – 07:00 Field Trip to Sandia (Bradbury Museum)

**Week 6 July 14-18, 2014** - locations vary

**Monday**
08:00 – 09:30 Embedded Systems I (Bill Hodgkiss) 03/4200/301

**Tuesday**
08:00 – 09:30 Embedded Systems II (Bill Hodgkiss) 03/4200/301
03:00-05:00 Power Wall Tour-Metropolis Center

**Wednesday**
08:00 – 09:30 Embedded Systems III (Bill Hodgkiss) 03/4200/301
03:00 – 05:00 Graduate School Discussion (Farrar, Todd, Mentors)

**Thursday**
08:00 – 09:30 Embedded Systems IV (Bill Hodgkiss) 03/4200/301
03:00 – 05:00 Computational Sciences (Francois Hemez) 03/4200/101

**Friday**
08:00 – 09:30 Embedded Systems V (Bill Hodgkiss) 03/4200/301
03:00-05:00 Student Presentations II (Students, Mentors)

**Week 7 July 21-25, 2014** - all lectures and tutorials are in 03/4200/101

**Monday**
08:00 – 09:30 Model Verification and Validation I (Francois Hemez)

**Tuesday**
08:00 – 09:30 Model Verification and Validation II (Francois Hemez)
03:30-05:00 Lecture: (Doug Adams)

**Wednesday**
08:00 – 09:30 Model Verification and Validation III (Francois Hemez)

**Thursday**
08:00 – 09:30 Model Verification and Validation IV (Francois Hemez)

**Friday**
08:00 – 09:30 Model Verification and Validation V (Francois Hemez)
03:00 – 05:00 Student Presentations III (Students, Mentors)
**Week 8 July 28-August 1, 2014** - all lectures and tutorials are in 03/4200/101

**Monday**
08:00 – 09:30

**Tuesday**
08:00 – 09:30
03:30-05:00 Smart Materials (Steven Anton)

**Wednesday**
08:00 – 09:30

**Thursday**
08:00 – 09:30 Aerospace Systems (Nick Lieven)
03:30-05:00 Robotics (Chris Anderson)

**Friday**
08:00 – 09:30

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**Week 9 August 4-8, 2014**

**Monday**
Open

**Tuesday**
Practice Sessions - all practice sessions are in 03/4200/101
08:30 – 09:30 Group 1
09:30 – 10:30 Group 2
10:30 – 11:30 Group 3
11:30 – 01:00 Lunch Break
01:00 - 02:00 Group 4
02:00 - 03:00 Group 5
03:00 – 04:00 Group 6
04:00 – 05:00 Group 7

**Wednesday**
Presentations - all presentations are in 03/4200/101
11:00 – 01:30 Institute Cookout-LARP Patio (NW)
03:00 – 03:30 Presentation Group 1
03:40 – 04:10 Presentation Group 2
04:20 – 04:50 Presentation Group 3

**Thursday**
Presentations - all presentations are in 03/4200/101
08:00 – 09:00 Presentation Group 4
09:10 – 09:40 Presentation Group 5
09:50 – 10:20 Presentation Group 6
10:30 – 11:00 Presentation Group 7
11:00 – 02:30 Departure Processing
03:00 – 05:00 Lab Clean up and Equipment Return

**Friday**
08:15 – 09:15 Summer School Exit Survey Discussion (301 Breakroom)
09:15 – 12:00 Wrap Up