SUMMER SESSION,
INTERNSHIPS, AND COMPUTER
FIELD EXPERIENCE

DR. HNYATSHIN, ADVISING SESSION 11/04/16
INTRODUCTION

Lots of companies are looking to hire CS graduates

- Lockheed Martin
- ASRC Federal Mission Solutions
- JP Morgan Chase
- ATMT LLC
- Perka
- others
Year-round part-time casual employment

- **Sophomore / Junior Year**: Summer Internship (June – August fulltime)
- **Fall/Winter/Spring Junior Year**: Casual Part-Time continued employment; where student can work anywhere from zero to 40 hours/week
  - 999 hours limit per year
- **Junior / Senior**: Summer Internship (June – August fulltime)
- **August / September of Senior Year**: LM would typically provide a job offer for full-time employment upon graduation
- **Fall/Winter/Spring of Senior Year**: Casual Part-Time continued employment
- **Graduation**: fulltime offer
Rotary and Mission Systems (RMS) provides systems engineering, software development, training solutions and complex program management for global security, civil and commercial markets. Our mission is to be the world’s leading global security company. To achieve this, RMS draws on its core capabilities in advanced platforms and weapons, C4ISR, global sustainment, training and sensors. RMS has more than 35,000 employees working on over 1,000 programs at 25+ locations across the U.S. and around the world.

The Integrated Warfare Systems & Sensors line of business provides sea-based missile defense, radar, and electronic warfare systems for the U.S. Military and maintains active contracts with than 40 countries.

The Ship & Aviation Systems line of business manages a diverse portfolio, including the Littoral Combat Ship and Future Frigate; Coast Guard systems; fixed-wing aircraft systems; products for rotary-wing and fixed-wing aircraft; unmanned aerial vehicles; lighter-than-air systems, laser systems.

The Training and Logistics Solutions provides innovative mission readiness and sustainment technologies for militaries and civil airlines in more than 50 countries.

The C4ISR & Undersea Systems business develops next-generation undersea warfare systems, unmanned underwater vehicles, acoustic sensors, ruggedized computing, and command, control, communication and network systems.

The Sikorsky business pioneers flight solutions that bring people home everywhere... every time. Sikorsky helicopters are used by all five branches of the United States Armed Forces, along with military services and commercial operations in 40 nations.

The Sikorsky business is one of the few companies in the world that designs, produces, and supports all five types of helicopters: commercial, cargo, assault, combat and military. Sikorsky is at the forefront of innovation and development in rotorcraft technology, pioneering vertical flight for over 100 years.

Mission Systems Engineering - Be at the forefront of algorithm design for our advanced control systems and platforms and get involved in the execution of full system development from advanced concept analysis, requirements gathering, prototyping/design, system implementation, and system integration and test.

Product Engineering - Utilize mechanical design and analysis approaches to develop the most advanced electronic systems and sensors including aerial vehicles, sonar/radar, naval systems, and ground detection platforms.

Software Engineering - Perform design, code, and test of software that runs on next generation computing systems that save lives, control advanced weapon systems, and simulate environments for revolutionary training and development.

NOTE: If you are interested in exploring our many rewarding career possibilities, create and submit a profile via the Lockheed Martin website (http://www.lockheedmartinjobs.com). Apply directly to one or more requisition numbers above applicable to your educational background and experience.
If interested in exploring our many rewarding career possibilities, create and submit a profile via the LM Website [http://www.lockheedmartinjobs.com](http://www.lockheedmartinjobs.com)

Apply directly to one or more of the requisition numbers above.
How to Create a Profile and Submit a Resume to Lockheed Martin

Step 1: Creating a Job Profile

- To begin go to www.lockheedmartinjobs.com
- Click on relevant button labeled “Returning Job Seekers”
- Enter your E-mail address and password if you have previously set up an account
- Click on “click here to create a new account” if you need to create a new account

*Please note:
In completing your profile, you will upload a resume to the Lockheed Martin database. At this point, your resume becomes available for viewing by hiring managers and recruiters.

Search Openings – View all current job openings
- Job Submission Status – Check on the status of your job submission
- Edit Your Profile – Update your login and other pertinent information
- Resume/CV Manager – Upload, edit or delete up to five versions of your resume
- Search Agent Manager – Create, update, or delete saved searches
- Job Cart – View or submit your resume to jobs you previously saved
- Saved Drafts – You may complete any drafts that you have saved

*Please note:
In completing your profile, you will upload a resume to the Lockheed Martin database. At this point, your resume becomes available for viewing by hiring managers and recruiters.

To submit your resume for a specific position, you will need to search for jobs and then submit your resume to each position of interest.

Step 2: Search for Jobs

Quick Search:
- For a quick overview of jobs available, click on “More Search Options”
- For a detailed search click on “Search Openings” after logging into your profile

Turn to next page for additional instructions
How to Create a Profile and Submit a Resume to Lockheed Martin

2 Search for Jobs... continued

Advanced Search:
- You will be directed to the Job Search function where you can refine and narrow your job search.
- You can search on any of the fields shown:
  - State
  - Foreign Location
  - Virtual
  - Job Category
  - LM Careers Business Unit
  - Job Class
  - Security Clearance
  - Program
  - Date Posted
  - Key Word
  - Req ID
  - Proximity Search

Step 3 Submit Your Resume to a Specific Position

- Once you have entered your criteria, all open positions including your criteria will appear.
- Click on the Industry Job Title to view the position details
- You have several options available
  - Submit to Job(s) – allows you to create a specific cover letter for the position selected
  - Send to Friend – allows you to email to a friend
  - Save to Cart – save the position to a cart for consideration at a later time
  - View Similar Jobs – view jobs that are similar to that selected
- You may also:
  - Home – return to the Home screen
  - Search Openings – return to the search screen
  - Search Results – return to the current list of openings based on your criteria search
  - Job Details – view job details of positions of interest

Search results
Your search criteria: N/A | Refine search

Clear checked

<table>
<thead>
<tr>
<th>Industry Job Title</th>
<th>City</th>
<th>State</th>
<th>LM Careers Business Unit</th>
<th>Security Clearance</th>
<th>Req ID</th>
<th>Date Updated</th>
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</thead>
<tbody>
<tr>
<td>Cradle Mechanic A.exe</td>
<td>Kings Bay</td>
<td>Georgia</td>
<td>ES94400 SPACE SYSTEMS COMPANY</td>
<td>Top Secret</td>
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<td>21-Jan-2015</td>
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<td>Systems Integration &amp; Test Engineer</td>
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<td>Texas</td>
<td>ES95043 AERONAUTICS COMPANY</td>
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<td>301827R</td>
<td>21-Jan-2015</td>
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<tr>
<td>Bus Data Analyst</td>
<td>Sunnyvale</td>
<td>California</td>
<td>ES94400 SPACE SYSTEMS COMPANY</td>
<td>Secret</td>
<td>302830R</td>
<td>21-Jan-2015</td>
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</tbody>
</table>
ASRC Federal Mission Solutions (AFMS)

- **AFMS** is a full-service systems and software engineering provider.
- **AFMS Customers**
  - Lockheed Martin
  - L3 Communications
  - United Status Navy
  - United States Coast Guard
  - Missile Defense Agency (MDA)
  - ...
- **AFMS Headquarters** are in Moorestown, NJ
- **AFMS Staff**
  - 426 Employees Dedicated to Accomplishing AFMS’s Core Mission
  - 285 Software Engineers Develop and Maintain the Software that Drives the Navy’s Aegis Weapon System (AWS)
Available Opportunities at AFMS

- AFMS is looking for dedicated and highly motivated co-op, interns and/or graduates who are interested in joining a diverse development team as entry level software engineers.

- Apply at [http://www.asrcfederal.com/careers/Pages/jobs.aspx](http://www.asrcfederal.com/careers/Pages/jobs.aspx)
  - Select “Job Openings,” in the search field,
  - Click “Show Criteria” and enter one of the following in the “Job Number” box:
    - 16001602 – Internship/Entry-level from Career Fair
    - 16001690 – Junior Software Developer

- Rowan has done a superb job in preparing students for the industry and they have been a great fit in our organization.
  - Since 2008, AFMS has hired 48 Rowan graduates.
  - AFMS is also benefiting from the augmented skills of the first cohort of graduates from the in-house employee Rowan Master’s program.
  - Many Rowan Interns have stayed on-board as “casual employees” so they can continue to work and gain experience through graduation.
    - Generally leads to full-time employment upon performance evaluation and official interview.
JP MORGAN CHASE

JP Morgan Chase is a technology company

- 40,000 employees innovating with the latest technologies
- 2500 technologists in DE
  - Provide support to all of the business lines (investment banking, corporate banking, consumer banking, etc.)

Example of Technologies

- Innovations with Big Data technologies (Hadoop spark) to drive our Advanced Analytics / Data Science practices forward
- Building cloud platforms and running new applications on cloud platforms
- Leader in Mobile Payments patents and technologies
- Leader in the digital and mobile banking solutions
- Exploring Blockchain partnerships, with JPMC driving open source type solutions
We utilize modern Software Development practices

- Our work environment modeled after silicon valley environments
- We develop software using Agile development practices
- We automate code delivery into test and production regions to allow for more frequent deployments

JP Morgan Chase technology hub, is only 45 minutes from campus

Internships/Full-time Jobs:

- Would like to attract juniors in computer engineering or Computer Science
- Another Rowan resume pull on **November 10th 2017 (APPLY)**
- 2017 Technology Analyst Program - Full-Time Program
- 2017 Technology Analyst Program - Summer Program
  - [https://jpmorgan.tal.net/vx/appcentre-americas_jobs/brand-0/candidate(so)/pm/1/pl/1/opf/4915-2017-Technology-Analyst-Program-Summer-Program/en-GB](https://jpmorgan.tal.net/vx/appcentre-americas_jobs/brand-0/candidate(so)/pm/1/pl/1/opf/4915-2017-Technology-Analyst-Program-Summer-Program/en-GB)
INTERNSHIPS

- Students are responsible for securing an internship/co-op
- The Department and University will help the students with identifying the places to apply
- Typical internship runs over the summer
  - Not enough time for significant contributions
  - Many internships extend into school year as part time employment
- Longer internship or co-ops are more beneficial
  - 6-8 month internship allows students to provide solid contribution to company
  - Allow students to earn more money ($16-25/hour)
  - Allows the company to conduct extended interview
CHALLENGES OF 6-8 MONTH CO-OP

- **Financial Aid**
  - Financial aid may lapse if not a full-time student for more than 6 months
  - **Solution:** students will receive a non-academic credit for their internship

- **Fees**
  - Students will have to pay fees while doing co-op

- **Staying on track for graduation**
  - Developed a summer schedule
  - Any CS student can take those

- **Housing**
  - Working to secure housing for students over the summer and possibly during co-op
<table>
<thead>
<tr>
<th>FIRST SEMESTER (fall)</th>
<th>SECOND SEMESTER (spring)</th>
<th>SUMMER SEMESTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Science Learning Community</td>
<td>Obj. Oriented Prog &amp; Data Abstraction</td>
<td></td>
</tr>
<tr>
<td>Intro to Object Oriented Programming (RS)*</td>
<td>Foundations of Computer Science</td>
<td></td>
</tr>
<tr>
<td>(if prepared, otherwise ISP - Java)</td>
<td>College Composition II</td>
<td></td>
</tr>
<tr>
<td>Calculus I (if prepared, otherwise pre-calculus)</td>
<td>Calculus II</td>
<td></td>
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<tr>
<td>Discrete Structures</td>
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<tr>
<td><strong>TOTAL 14</strong></td>
<td><strong>TOTAL 14</strong></td>
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<table>
<thead>
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<th>THIRD SEMESTER (fall)</th>
<th>FOURTH SEMESTER (spring)</th>
<th>SUMMER SEMESTER</th>
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<tbody>
<tr>
<td>Computer Organization</td>
<td>Design &amp; Analysis of Algorithms</td>
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<tr>
<td>Data Structures and Algorithms</td>
<td>Linear Algebra</td>
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<tr>
<td>Computer Lab Techniques</td>
<td>Lab Science Choice **</td>
<td></td>
</tr>
<tr>
<td>(highly recommended; counts as Free Elective)</td>
<td>Public Speaking</td>
<td></td>
</tr>
<tr>
<td>General Education course</td>
<td>General Education course (ACE bank)</td>
<td></td>
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<tr>
<td>(HHL, Intro to Symbolic Logic is recommended)</td>
<td></td>
<td></td>
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<tr>
<td>Free Elective</td>
<td></td>
<td></td>
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<tr>
<td><strong>TOTAL 16</strong></td>
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<thead>
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<th>FIFTH SEMESTER (fall)</th>
<th>SIXTH SEMESTER (spring)</th>
<th>SUMMER SEMESTER</th>
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<tbody>
<tr>
<td>Programming Languages</td>
<td>Internship</td>
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<tr>
<td>Software Engineering I (Writing Intensive (WI))</td>
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<td></td>
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<tr>
<td>General Education course</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lab Science Choice **</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Probability and Statistical Inference for Computer Systems</td>
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<tr>
<td><strong>TOTAL 16</strong></td>
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<th>SEVENTH SEMESTER (fall)</th>
<th>EIGHTH SEMESTER (spring)</th>
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<tr>
<td>Computer Science Senior Project</td>
<td>CS Restricted elective †</td>
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<tr>
<td>General Education course (SBS Bank)</td>
<td>General Education course</td>
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<tr>
<td>(Multicultural/Global Studies (M/G) course)</td>
<td>(HHL Literature (LIT) course)</td>
</tr>
<tr>
<td>Lab Science Choice **</td>
<td>Free Elective</td>
</tr>
<tr>
<td>CS restricted elective †</td>
<td>Free Elective</td>
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<tr>
<td>Computer Field Experience</td>
<td>Free Elective</td>
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<tr>
<td><strong>TOTAL 16</strong></td>
<td><strong>TOTAL 15</strong></td>
</tr>
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SUMMER 2017 DRAFT SCHEDULE

- **11 week summer session**
  - May 22\(^{nd}\) -- August 11\(^{th}\)
  - Finals week: August 7\(^{th}\) – August 11\(^{th}\)
  - Week of July 4\(^{th}\) -- no classes

- **Draft Schedule for Summer 2017**
  - CS 04430 - Database Systems: Theory And Programming -- Professor Jack Myers
    - MW 4:00 – 6:00 pm
  - CS 07351 - Cyber Security: Fundamentals, Principles and Applications – Professor Mike Davie
    - TR 4:00 – 6:00 pm
SUMMER 2017 DRAFT SCHEDULE

Draft Schedule
- CS 04.372 -- Advanced Android Programming -- Dr. John Robinson
  ✓ online
- CS 06.417 - Principles of Network Security or CS 07.480 - Intro to Data Mining – Dr. Nadeem Shahzad
  ✓ MTR 11:00 – 12:15 pm
- CS 07.480 - Intro to Data Mining -- Dr. Nadeem Shahzad
  ✓ TR 1:30 – 3:30 pm
- INTR 01. 266 Computers and Society – Prof. Sypniewski
  ✓ Online
- CS 04.114 OOPDA – 5 weeks, Prof. Weissman, TBD
- CS 04.102 ISP – TBA, Prof. Haddad
COMPUTER FIELD EXPERIENCE

✓ Will be offered routinely once a year in Fall
✓ Only those who complete CS-related internship or co-op are allowed to register for the class
✓ Course requirements
  • Internship work must be equivalent to a 3 credit course (min 150 hours)
  • Must maintain weekly logs signed by your supervisor
  • Must obtain letter from supervisor
  • Course will count as 3 credit CS Restricted Elective, if completed CS-based internship and satisfied all course requirements
  • Each student will meet with the course instructor
  • Each student Will write an internship report and executive summary
  • Each student Will give a 15-25 minutes presentation in LiBBY