

**SUMMER SESSION,
INTERNSHIPS, AND COMPUTER
FIELD EXPERIENCE**

DR. HNATYSHIN, 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

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.

INTERN POSITIONS

Engineering Disciplines	Moorestown, NJ	Owego, NY	Orlando, FL	Manassas, VA	Syracuse, NY
	http://tinyurl.com/RMS-Moorestown-Intern-Event	http://TinyURL.com/RMS-Owego-Fall-Event	http://tinyurl.com/RMS-OrlandoFallEvent	http://tinyurl.com/rmsmanassasfallevnt	http://tinyurl.com/RMS-Syracuse-Intern-Event
Mission Systems Engineering (ISE, IE, SE, EE, CE, CS, AE, ECE, Math/Physics, ME, Other)	368769BR – Radar System 368771BR – System Test 368774BR – Cyber/Network 368775BR – Modeling 368778BR – Combat System	368673BR	367057BR	366333BR	368795BR
Hardware Engineering (EE, CE, ECE, ME)	368770BR – EE	368673BR	367069BR – ME 367059BR – EE	366986BR – EE	368806BR – ME
Software Engineering (CS, CE, EE, ECE, SW)	368764BR	368673BR	367045BR	366336BR	368781BR

AE - Aerospace Engineering, SE - Systems Engineering, CS - Computer Science, EE - Electrical Engineering, CE - Computer Engineering, ECE - Electrical and Computer Engineering, ME - Mechanical Engineering, SW - Software Engineering, IS - Information Systems, ISE - Industrial & Systems Engineering, IE - Industrial Engineering

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.



LM RMS – Moorestown System Engineering Internship Opportunities

Radar System

Req Number:
368769BR

Description:

Assist multi-functional integrated product development team in a radar system/ subsystem design, development, modeling, simulation, integration and test.

Degree:

EE, CS, CE, Physics, Math

System Test

Req Number:
368771BR

Description:

Responsible for high level test planning and test execution of complex systems for the U.S. Coast Guard, U.S. Navy, U.S. Air Force, U.S. Missile Defense Agency and International customers.

Degree:

EE, CS, CE, Physics, Math

Cyber/Network

Req Number:
368774BR

Description:

Responsible for setting and enforcing the security policy of our Defense Customers along with the identification and mitigation of all system vulnerabilities.

Degree:

EE, CS, CE, Physics, Math

Modeling

Req Number:
368775BR

Description:

Responsible for software architecture/design and development of new modeling capabilities for various discrete event simulation products.

Degree:

EE, CS, CE, Physics, Math

Combat System

Req Number:
368775BR

Description:

Perform systems engineering assignments including Model Based Systems Design, Performance Modeling, Requirements Development, Hardware & Software Integration, Test and Analysis for large scale systems.

Degree:

EE, CS, CE, Physics, Math

Software

Req Number:
368764BR

Description:

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.

Degree:

CS, CE, EE, ECE, SW

Mechanical

Req Number:
368770BR

Description:

Responsible for developing the best-in-class products and solutions in an exciting engineering and production environment with state of the art hardware and systems.

Degree:

EE, CE, ECE, ME

* CS - Computer Science, EE - Electrical Engineering, CE - Computer Engineering, ECE - Electrical and Computer Engineering, ME - Mechanical Engineering, SW - Software Engineering

*If interested in exploring our many rewarding career possibilities, create and submit a profile via the LM Website <http://www.lockheedmartinjobs.com>
Apply directly to one or more of the requisition numbers above.*

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

The screenshot shows the Lockheed Martin Jobs website interface. At the top, there is a navigation menu with links for WHO WE ARE, WHAT WE DO, NEWS & EVENTS, INNOVATIONS, and CAREERS. A search bar is located in the top right corner. Below the navigation is a large banner with the text "WE'RE READY TO TAKE THE NEXT GIANT LEAP." and a "LEARN MORE" button. The main content area is divided into two sections: "LEARN" and "EXPLORE". The "LEARN" section features a gear icon and text about groundbreaking discoveries. The "EXPLORE" section features a magnifying glass icon and text about making a difference. Below these sections are two search filters: "Customize my experience" with a dropdown menu and a "GO" button, and "Quick Job Search" with a search bar and a "GO" button. At the bottom of the "EXPLORE" section, there are three buttons: "Returning Job Seekers: Students", "Returning Job Seekers: Experienced", and "More search options".

The screenshot shows the Lockheed Martin Jobs website interface, specifically the job search section. It features a "Quick Job Search" search bar and a map of the United States. Below the search bar, there is a "You can conduct a general job search by entering keywords in our quick job search tool." section. At the bottom, there are several filters: "Job Class", "Job State", "Job Category", and "International Jobs".

Turn to next page for additional instructions

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

Search openings
View all current job opportunities, or search on specific criteria to find jobs that match your interests.

Job submission status
Check the status of your job submission.

Edit your profile
Update your login, contact information, education, work experience and any additional information you provided.

Resume/CV manager
Upload, edit, or delete up to five versions of your resume and cover letter.

Search agent manager
Create, update, or delete saved searches.

Job cart
View or submit your resume to jobs you previously saved.

Saved drafts
Did you begin a submission to a job posting and save it as a draft? From here you may complete any drafts that you have saved.

Communications
Access your email/communications history here.

Log out

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 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

Home
 Search openings
 Search results

[? Help](#)

Search results Your search criteria: N/A | [Refine search](#)

Results 1 – 50 of 3418

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Clear checked

<input type="checkbox"/>	Industry Job Title	City	State	LMCareers Business Unit	Security Clearance	Req ID	Date updated
<input type="checkbox"/>	Ordnance Mechanic Assoc	Kings Bay	Georgia	ESS4400 SPACE SYSTEMS COMPANY	Top Secret	298055BR	21-Jan-2015
<input type="checkbox"/>	Systems Integration & Test Engineer	Fort Worth	Texas	ESS0343 AERONAUTICS COMPANY	Secret	301827BR	21-Jan-2015
<input type="checkbox"/>	Bus Devel Analyst Asc	Sunnyvale	California	ESS4400 SPACE SYSTEMS COMPANY	Secret	302839BR	21-Jan-2015



ASRC Federal Mission Solutions (AFMS)



- **AFMS** is a full-service systems and software engineering provider.
- **AFMS Customers**
 - Lockheed Martin
 - L3 Communications
 - United States 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>
 - 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 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:

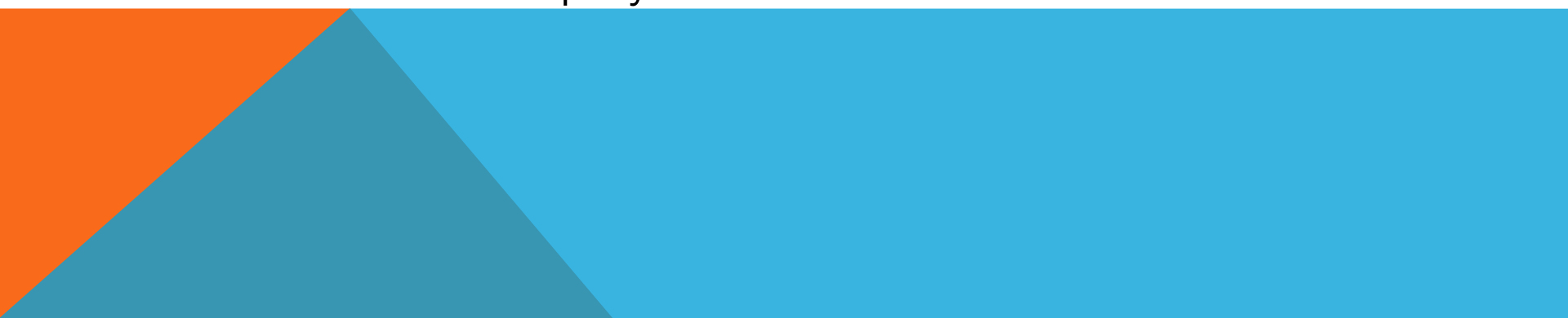
- ❑ Would like to attract juniors in computer engineering or Computer Science
- ❑ Another Rowan resume pull on **November 10th 2017 (APPLY)**
- ❑ 2017 Technology Analyst Program - Full-Time Program

https://jpmorgan.tal.net/vx/appcentre-americas_jobs/brand-0/candidate/so/pm/1/pl/1/opp/4922-2017-Technology-Analyst-Program-Full-Time/en-GB

- ❑ 2017 Technology Analyst Program - Summer Program

https://jpmorgan.tal.net/vx/appcentre-americas_jobs/brand-0/candidate/so/pm/1/pl/1/opp/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

NEW CO-OP COHORT SCHEDULE

FIRST SEMESTER (fall)		SECOND SEMESTER (spring)		SUMMER SEMESTER	
Computer Science Learning Community	0	Obj. Oriented Prog & Data Abstraction	4		
Intro to Object Oriented Programming (RS)* <i>(if prepared, otherwise ISP - Java)</i>	4	Foundations of Computer Science	3		
College Composition I	3	College Composition II	3		
Calculus I <i>(if prepared, otherwise pre-calculus)</i>	4	Calculus II	4		
Discrete Structures	3				
TOTAL	14	TOTAL	14		
THIRD SEMESTER (fall)		FOURTH SEMESTER (spring)		SUMMER SEMESTER	
Computer Organization	3	Design & Analysis of Algorithms	3	Operating Systems	3
Data Structures and Algorithms	4	Linear Algebra	3	Principles of Digital Computers and Digital Computer Laboratory	3
Computer Lab Techniques <i>(highly recommended; counts as Free Elective)</i>	3	Lab Science Choice **	4	Computers and Society <i>(counts as SBS)</i>	4
General Education course <i>(HHL, Intro to Symbolic Logic is recommended)</i>	3	Public Speaking	3	CS restricted elective †	3
Free Elective	3	General Education course <i>(ACE bank)</i>	3		
TOTAL	16	TOTAL	16	TOTAL	13
FIFTH SEMESTER (fall)		SIXTH SEMESTER (spring)		SUMMER SEMESTER	
Programming Languages	3	Internship <i>(12 Rowan "affiliation: hours")</i>			
Software Engineering I <i>(Writing Intensive (WI))</i>	3				
General Education course	3				
Lab Science Choice **	4				
Probability and Statistical Inference for Computer Systems	3				
TOTAL	16	TOTAL	0		
SEVENTH SEMESTER (fall)		EIGHTH SEMESTER (spring)			
Computer Science Senior Project	3	CS Restricted elective †	3		
General Education course (SBS Bank) <i>(Multicultural/Global Studies (M/G) course)</i>	3	General Education course <i>(HHL Literature (LIT) course)</i>	3		
Lab Science Choice **	4	Free Elective	3		
CS restricted elective †	3	Free Elective	3		
Computer Field Experience	3	Free Elective	3		
TOTAL	16	TOTAL	15		

SUMMER 2017 DRAFT SCHEDULE

❑ 11 week summer session

- ❖ May 22nd -- August 11th
- ❖ Finals week: August 7th - August 11th
- ❖ Week of July 4th -- 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