

# FOUR YEAR PLAN STEP-BY-STEP

DEPT: COMPUTER SCIENCE

YEAR: FALL 2019

The Four Year Plan is required of all undergraduate students who are a declared Computer Science major. This plan is meant to assist students in assessing which outstanding degree requirements (major and general education) have been completed and what requirements are still outstanding. The plan is meant to serve as a guide and is likely to change semester-to-semester.

This is not just a step-by-step for creating a Four Year Plan, it is also a walkthrough of your degree audit and what each sections looks like and means. For the purposes of this step-by-step we are using a variety of students to show various incomplete degree audit components.

## RESOURCES NECESSARY TO COMPLETE THE FOUR YEAR PLAN

You will need to have access to the following:

1. A blank Four Year Plan sheet
2. A copy of your degree audit via u.achieve
3. The Computer Science four year plan for your specialization

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# YOUR DEGREE AUDIT

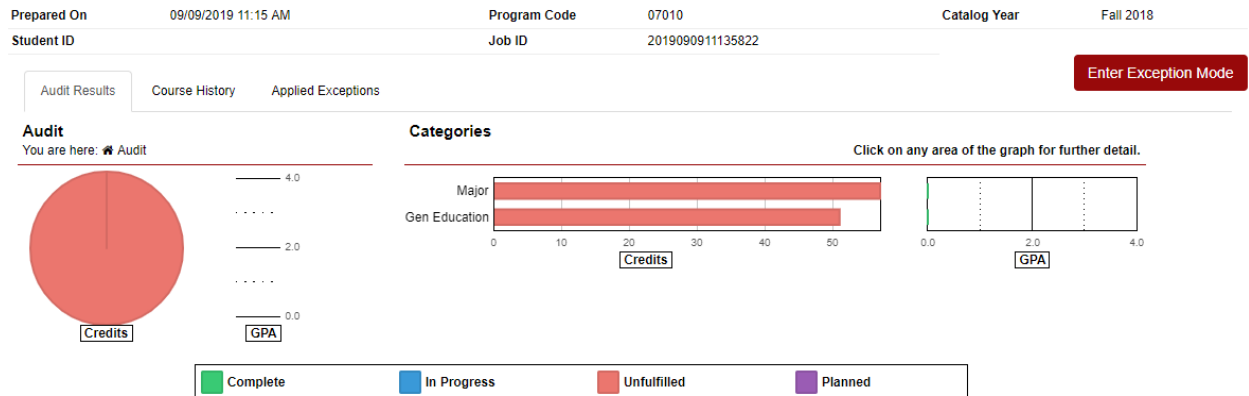


Figure 1 Top portion of an undergraduate degree audit

This is a sample view of a student's audit for Computer Science – General Track. On the left is a pie chart of how many credits the student has completed and has left to complete. This will take into consideration any AP/IB/Transfer Credit a student may be coming in with. The GPA bar shows their GPA in relation to a 4.0; this student does not have a University of Maryland GPA so there is nothing to note here. The "Categories" bar chart shows completion of credits in Major, General Education, and General Elective's coursework.

## Requirements & Subrequirements

- Complete (Green checkmark)
- Planned (Purple calendar)
- In Progress (Blue box)
- Unfulfilled (Red X)

## Course Codes

- DUP - Duplicate Course
- IP - In Progress Course
- RAC - UMD Course: Academic Clemency
- RNA - UMD Course: Not Applicable
- ROK - Repeatable Course
- RPT - Repeated Course
- TDU - Transfer Course: Duplicate
- TNA - Transfer Course: Not Applicable
- tna - Transfer Course: Not Acceptable

## Special Grades

- NG - No Grade
- M\_ - Mid-Term Grade
- T\_ - Transfer Grade

## TIPS

There are codes written throughout the audit and we encourage you to review them (see Figure 2).

To tell if you are on the right track towards graduation, the audit will show a green check for "Complete" or a blue box for "In-Progress." Requirements that are still remaining are marked with a red "X."

If you are making adjustments to your schedule, these changes will not show on your degree audit right away. You will want to wait 24 hours for the system to update with your correct information/schedule.

Figure 2 Interpreting Audit Results Key

## UNIVERSITY OF MARYLAND DEGREE REQS

All students at the University of Maryland are required to complete, at minimum, a total of 120 credits to receive their bachelor's degree. This rule also applies for students pursuing a double major.

Students who are pursuing a dual degree must complete no fewer than 150 credits to receive both degrees.

Students must also maintain a Major GPA of a 2.0 or higher to be eligible to receive their degree(s).

## COMPUTER SCIENCE DEGREE REQS

The Computer Science major is comprised of several parts: Upper Level Concentration, Lower Level Requirements, Upper Level Requirements, CMSC Electives (dependent on specialization), and General Education Requirements. You may find you are taking courses that do not satisfy any of these categories and this is OK. Remember, you need a total of 120 credits minimum to graduate.

### UPPER LEVEL CONCENTRATION

The Upper Level Concentration, as seen in Figure 3, is required of all Computer Science students regardless of specialization.

Students must complete a minimum of 12 credit hours of 300 - 400 level courses in one discipline outside of Computer Science with an average grade of C- or higher. No course that is in, or cross-listed as, CMSC may be counted in this requirement. Only 1 independent study or experiential learning course may be used. Students who are pursuing a minor or a second major can use those credits in this area.

If you are a student matriculating Fall 2019 and later, this area will not auto-populate courses rather, you will see "**SELECT FROM: A-CMSC-SUPP-1 MAJORY.**" Your advisor will need to populate this area every semester or, once you have completed or are in the process of completing this requirement.

### LOWER LEVEL REQUIREMENTS

Regardless of specialization, all students complete the same lower level requirements, they may just be presented differently on the degree audit.



### [UNIV] UMD Degree Requirements

- ✘ 1) Total UG Cumulative Credits - minimum required is 120  
No baccalaureate degree will be awarded in instances where fewer than 120 credit hours have been earned.  
NEEDS: 120.0 CREDITS
- ✘ 2) Students must take a minimum of 30 credits at UMD.  
Residency Requirement  
NEEDS: 30.0 CREDITS
- ✘ 3) Students must take a minimum of 15 credits (300 Level or above).  
NEEDS: 15.0 CREDITS
- ✘ 4) All candidates for an undergraduate degree must take a minimum of 12 upper level credits in their major field.  
NEEDS: 12.0 CREDITS



### Major GPA



### Upper Level Concentration

- ✘ 1) Complete 12 credits at the 300-400 level in an area outside of CMSC. Chosen in consultation with your CMSC advisor.  
\*\*\*No course cross-listed with CMSC may be used for this requirement.  
NEEDS: 12.0 CREDITS 1.700 GPA  
SELECT FROM: A-CMSC-SUPP-1 MAJORY

Figure 3 Incomplete Degree Requirements example

- ▼ ✖ **Lower Level Requirements**
- ✖ 1) Math Requirement
    - NEEDS: 2 COURSES
    - SELECT FROM: MATH 140, 141
  - ✖ 2) Computer Science Courses
    - NEEDS: 6 COURSES
    - SELECT FROM: CMSC 131, 132, 216, 250, 330, 351
  - ✖ 3) STAT4xx with MATH141 prerequisite
    - NEEDS: 1 COURSE
    - SELECT FROM: STAT 400, 401, 405, 410, 411, 420, 420, 430, 440, 450, 470
  - ✖ MATH Requirements: These courses must have prerequisite of MATH141 or higher; cannot be cross-listed with CMSC.
    - NEEDS: 1 COURSE
    - SELECT FROM: MATH 240, 241, 246, 310, 340, 341, 4 STAT 401, 405, 410, 411, 420, 430, 440, 450, 470

Figure 4 Incomplete Lower Level Computer Science Degree Requirements example

In Figure 4, you will see the all the lower level requirements broken into sub-requirements with a list of courses that will satisfy that specific sub-requirement.

1. Math Requirement: may only be satisfied using MATH140 – Calculus I and MATH141 – Calculus II; this would also include any AP/IB/Transfer Credit.
2. Computer Science Courses: CMSC131 through CMSC351 will be listed. If you have taken an exemption exam and it has not yet been input on your audit, please notify your advisor without delay so they can make the appropriate changes to your degree audit.
3. STAT4XX and MATH Requirements: This lists the possible courses that could satisfy your MATH/AMSC/STAT and STAT4XX requirement. If you have any questions about a course that is not listed counting on your degree audit, you will want to contact your advisor without delay.

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## REMINDERS

- If you are a student pursuing the Data Science specialization, you must take MATH240 – Linear Algebra.
- Several Computer Science courses at the 400-level may require additional math courses that may not satisfy outstanding degree requirements. If you are unsure about how to fit those math courses in your four year plan you will want to speak with your advisor during your mandatory advising session.
- If you are pursuing the Data Science specialization, you will see MATH240 listed in Sub-Requirement 1 and the STAT requirement has been moved to Upper Level Requirements.

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## UPPER LEVEL REQUIREMENTS

In addition to the General Track, you may choose to pursue a specialization in Cybersecurity or Data Science (you cannot pursue both). Each specialization has a different set of upper level requirements. Any CMSC Elective coursework that is also required for the specialization will be included in this category for the purposes of this step-by-step.

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## GENERAL TRACK

If you are pursuing the General Track, you are required to complete 5 courses at the 400-level from at least 3 different areas with no more than 3 courses in any given area. A fourth course from an area will automatically be counted as a CMSC Elective.

### ✖ **Upper Level Requirements**

Complete 5 courses at 400 level from at least 3 areas with no more than 3 courses in a given area.

✖ 1) Systems

SELECT FROM: CMSC 411, 412, 414, 417

✖ 2) Information Processing

SELECT FROM: CMSC 420, 421, 422, 423, 424, 426, 427, 470

✖ 3) Software Engineering and Programming Languages

SELECT FROM: CMSC 430, 433, 434, 435, 436

✖ 4) Theory

SELECT FROM: CMSC 451, 452, 456 OR MATH 456 CMSC 457

✖ 5) Numerical Analysis

SELECT FROM: CMSC 460 OR AMSC 460 CMSC 466 OR AMSC 466

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### ✖ **CMSC Electives**

✖ 1) 6 Credits at the CMSC300/400 Level

Not eligible: CMSC330, 351

NEEDS: 6.0 CREDITS

Figure 5 Incomplete General Track Upper Level Requirements example

You are also required to complete 6 credits at the CMSC300/400 level not including CMSC330 and CMSC351. For the CMSC Elective requirement, you are eligible to use three 1-credit CMSC388/389 courses to satisfy 3-credits worth of this requirement.

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## CYBERSECURITY

Similar to the General Track, for the CMSC Elective requirement, you are eligible to use three 1-credit CMSC388/389 courses to satisfy 3-credits worth of this requirement.

- ▼ **✘ Cybersecurity Specialization Requirements**
    - ✘ 1) Complete CMSC414 & CMSC465  
 NEEDS: 2 COURSES  
 SELECT FROM: CMSC 414, 456
    - ✘ 2) Complete four courses from below  
 NEEDS: 4 COURSES  
 SELECT FROM: CMSC 411, 412, 417, 430, 433, 451
- 

- ▼ **✘ CMSC Electives**
  - ✘ 1) 3 Credits at the CMSC300/400 Level  
 Not eligible: CMSC330, 351  
 NEEDS: 3.0 CREDITS

Figure 6 Incomplete Cybersecurity Specialization Requirements example

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## DATA SCIENCE

If you are pursuing the Data Science specialization, you will notice that in the upper level requirements STAT400 is listed here instead of in the lower level requirements. Data Science requires MATH240 – Linear Algebra and STAT400 - Applied Probability and Statistics I as “hard” requirements.

- ▼ **✘ Upper Level Requirements**
  - ✘ 1) Required  
 NEEDS: 4 COURSES  
 SELECT FROM: CMSC 320, 422, 424 STAT 400
  - ✘ 2) Complete One  
 NEEDS: 1 COURSE  
 SELECT FROM: CMSC 402, 420, 421, 423, 425, 426, 427
  - ✘ 3) Complete One  
 NEEDS: 1 COURSE  
 SELECT FROM: CMSC 451, 460 OR AMSC 460
  - ✘ 4) Complete Two  
 NEEDS: 2 COURSES  
 SELECT FROM: CMSC 411, 412, 414, 417, 430, 433, 434, 435

Figure 7 Incomplete Data Science Upper Level Requirements example

## REMINDERS

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- If you are interested in pursuing a specialization, or you would like to change your specialization, you will want to speak with your advisor about how to do so.

## GENERAL EDUCATION REQUIREMENTS

All students, regardless of major, must complete a minimum of 40 credits worth of general education coursework at the University of Maryland.

General education requirements are separated into four different categories: Fundamental Studies, Distributive Studies, Signature Courses, and Diversity.

Effective Fall 2012, all students at the University of Maryland are required to complete the University's General Education policy and should no longer follow CORE requirements. There are few exceptions to this policy; these exceptions can be found [here](#).

### THE GENERAL EDUCATION REQUIREMENTS AT THE UNIVERSITY OF MARYLAND

1. Expose students to different disciplines, improve fundamental academic skills, and strengthen a commitment to using knowledge and abilities to better themselves and others.
2. Prepare students to participate fully in a changing world.
3. Provide students with breadth of knowledge and disciplinary diversity.
4. Explore unfamiliar fields and to develop new intellectual and professional passions.
5. Engage students in traditional disciplines, established interdisciplinary programs, and emergent transdisciplinary fields.
6. Foster intellectual dexterity not only from mastering a broad range of subjects, but also from understanding the many ways knowledge is produced.
7. Ensure that students have basic skills in written and oral communication and also in mathematical analysis.
8. Understand and employ analytic reasoning.

At the beginning of the General Education Requirements section on U.Achieve each course that has a general education designation that you have completed will be noted here. In the example above, this student has completed 35.0 credits and Needs 5.0 credits. This includes the AP credits that they received.

The figures in the following sections are for you to see how complete and incomplete requirements look throughout this section. You will see that any course that has been used for multiple requirements is listed twice (e.g., MATH140 in the Fundamental Studies Math and Fundamental Studies Analytic Reasoning requirements).

Source: [General Education @ UMD](#)

▼ ✖ **[CORE/GenEd] General Education Required Credits**

- ✖ 1) Complete 40 credits of approved GenEd courses

( 35.0 CREDITS TAKEN)

Sp14	GVPT170	3.00	TP	U.S. GVPT/SCR 3 XGVPT US3 Advanced Placement Exam
Sp15	CHEM131	3.00	TP	CHEMISTRY/SCR 4 XCHEM4A Advanced Placement Exam
Sp15	CHEM132	1.00	TP	CHEMISTRY/SCR 4 XCHEM4B Advanced Placement Exam
Sp15	ECON200	3.00	TP	MICROECON/SCR 4 XECON MIC4 Advanced Placement Exam
Sp16	ECON201	3.00	TP	MACROECON/SCR 4 XECON MAC4 Advanced Placement Exam
Sp16	MATH140	4.00	TP	CALCULUS AB/SCR 5 XMATH AB5 Advanced Placement Exam
Fa16	ENGL101C	3.00	B+	ACADEMIC WRITING
Fa16	PHYS161	3.00	A	MECH & PARTICLE DYNAM
Sp17	COMM107	3.00	A-	ORAL COMM PRIN
Fa17	HIST289Y	3.00	A	CLTRL HIST PBLC HLTH
Fa18	ENES210	3.00	B-	ENT OPPORTUNITY ANALYSIS
Sp19	ARTT110	3.00	B+	ELEM DRAWING I

NEEDS: 5.0 CREDITS

Figure 8 General Education Requirements overview

## FUNDAMENTAL STUDIES

Fundamental Studies courses ensure that students have the basic skills in written and oral communication, in mathematical analysis, and in critical thinking that are important to their success across the curriculum and in their professional lives.

▼ ✖ **[GenEd] Fundamental Studies**

EARNED: 14.0 CREDITS

- ✔ 1) Academic Writing (FSAW)

Fa16	ENGL101C	3.00	B+	ACADEMIC WRITING
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- ✖ 2) Fundamental Studies Professional Writing (FSPW)

NEEDS: 1 COURSE

- ✔ 3) Oral Communication (FSOC)

Sp17	COMM107	3.00	A-	ORAL COMM PRIN
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- ✔ 4) Math (FSMA)

Sp16	MATH140	4.00	TP	CALCULUS AB/SCR 5 XMATH AB5 Advanced Placement Exam
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- ✔ 5) Analytic Reasoning (FSAR)

Sp16	MATH140	4.00	TP	CALCULUS AB/SCR 5 XMATH AB5 Advanced Placement Exam
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Figure 9 Incomplete Fundamental Studies requirements example



The **Fundamental Studies Academic Writing** requirement prepares students with a foundational understanding of the writing skills needed for success in further studies at Maryland and beyond. **As of fall 2017, students need to earn a C- or better to fulfill this requirement. This is a three-credit, one-course requirement.** The Academic Writing requirement may also be fulfilled by AP English Language and Composition—there is no direct course equivalency.

## DISTRIBUTIVE STUDIES

Distributive Studies courses expose students to a variety of disciplines even as they concentrate on a chosen field of study. The goal is a wide-angle view of the fields of learning, both established and emerging, that are pursued at a major university; however, this sampling must be more than cursory. Distributive Studies courses offer insights into the methods of the different disciplines, the kinds of questions disciplines ask, and their standards for judging the answers. Courses lead students to new perspectives and also challenge students to apply their new understandings.

▼ ✖ **[GenEd] Distributive Studies**  
*EARNED: 22.0 CREDITS*

✖	1) Humanities (DSHU)				
	Fa17 HIST289Y	3.00	A	CLTRL HIST PBLC HLTH	
	NEEDS: 1 COURSE				
✔	2) History & Social Science (DSHS)				
	Sp14 GVPT170	3.00	TP	U.S. GVPT/SCR 3 XGVPT US3 Advanced Placement Exam	
	Sp15 ECON200	3.00	TP	MICROECON/SCR 4 XECON MIC4 Advanced Placement Exam	
✔	3) Natural Sciences with Lab (DSNL)				
	Sp15 CHEM131	3.00	TP	CHEMISTRY/SCR 4 XCHEM4A Advanced Placement Exam	
	Sp15 CHEM132	1.00	TP	CHEMISTRY/SCR 4 XCHEM4B Advanced Placement Exam	
✔	4) Natural Sciences (DSNS or DSNL)				
	Fa16 PHYS161	3.00	A	MECH & PARTICLE DYNAM	
✔	5) Scholarship in Practice (DSSP)				
	Fa18 ENES210	3.00	B-	ENT OPPORTUNITY ANALYSIS	
	Sp19 ARTT110	3.00	B+	ELEM DRAWING I	

Figure 10 Incomplete Distributive Studies requirement example

### THE DISTRIBUTIVE STUDIES REQUIREMENT:

- Students must complete two courses in each area for a total of eight courses in Distributive Studies. One of the courses in the Natural Sciences must include a laboratory experience.
- Two of the eight courses must be I-Series courses. AP credit may not be used to satisfy the I-Series requirement.
- AP credit for Distributive Studies is limited to six of the eight courses. At least two of the courses (the I-Series courses) must be taken at the University of Maryland, College Park.

- Coursework within one's major is permitted to satisfy both the major and general education requirements.
- Distributive Studies courses do not necessarily have to be at the 100 or 200 levels, but ideally they should be courses with few or no prerequisites outside Distributive Studies to satisfy general education requirements.
- A Diversity requirement may be fulfilled by a course that is approved for both a Diversity category and for a Distributive Studies category.
- Distributive Studies courses that include an internship or research or service-learning project may be used to meet any Distributive Studies requirement.

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## I-SERIES

I-Series is the signature program of General Education at the University of Maryland. I-Series courses are lively and contemporary. They speak to important issues that spark the imagination, demand intellect, and inspire innovation. They challenge students to wrestle with big questions, and examine the ways that different disciplines address them.

I-Series courses are not surveys of particular fields of knowledge. Instead, I-Series courses provide students with the basic concepts, approaches, and vocabulary of particular disciplines and fields of study as well as an understanding of how experts in those disciplines and fields employ terms, concepts, and approaches.

<p>✓ ✓</p>	<p><b>[GenEd] I-Series</b>  <i>EARNED: 6.0 CREDITS</i></p>										
<p>✓</p>	<p>I-Series (SCIS)</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Fa17</td> <td style="padding: 2px;">HIST289Y</td> <td style="padding: 2px;">3.00</td> <td style="padding: 2px;">A</td> <td style="padding: 2px;">CLTRL HIST PBLC HLTH</td> </tr> <tr> <td style="padding: 2px;">Fa18</td> <td style="padding: 2px;">ENES210</td> <td style="padding: 2px;">3.00</td> <td style="padding: 2px;">B-</td> <td style="padding: 2px;">ENT OPPORTUNITY ANALYSIS</td> </tr> </table>	Fa17	HIST289Y	3.00	A	CLTRL HIST PBLC HLTH	Fa18	ENES210	3.00	B-	ENT OPPORTUNITY ANALYSIS
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Fa18	ENES210	3.00	B-	ENT OPPORTUNITY ANALYSIS							

Figure 11 Complete I-Series requirement example

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## DIVERSITY

Rather than affirm or celebrate difference, courses in the Diversity requirement investigate the complexities of human difference and commonality. The Diversity requirement emphasizes the promises and problems of plural societies and the challenges that must be addressed to achieve just, equitable, and productive societies. Courses in the Diversity requirement explore the gritty struggles through which plural societies are established and maintained.

Two categories of courses comprise the Diversity requirement: Understanding Plural Societies and Cultural Competence.

**Understanding Plural Societies** courses recognize that life in a globally competitive society of the 21st century requires an ability to comprehend both theoretical and practical dimensions of human difference. From that perspective, Understanding Plural Societies is the centerpiece of the University's Diversity requirement. Courses in this category speak to both the foundations—cultural, material, psychological, historical, social, and biological—of human difference and the operation or function of plural societies.

**Cultural Competence** provides opportunities to gain an increased understanding of cultures and cultural practices, while learning to communicate effectively across cultural differences in a diverse society and world. This diversity

category reflects a developmental, on-going process through which students learn about the lived experiences of individuals as members of socio-cultural groups and the complex interactions between groups. Cultural Competence courses emphasize acquisition of new knowledge, thoughtful consideration of issues of equity and justice, critical thinking, self-reflection, empathy, engaged global citizenship, and the development of skills necessary to work effectively with individuals, groups, and teams from diverse identities and perspectives.

### TO FULFILL THE DIVERSITY REQUIREMENT

▼ ✖ **[GenEd] Diversity**  
EARNED: 3.0 CREDITS

Courses fulfilling the Diversity requirement may double count with Distributive Studies and/or I-Series.

✔ 1) Understanding Plural Society (DVUP)

Fa17	HIST289Y	3.00	A	CLTRL HIST PBLC HLTH
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✖ 2) Cultural Competency (DVCC) or 2nd Understanding Plural Society (DVUP) course

NEEDS: 1 COURSE

Figure 12 Incomplete Diversity requirement example

- Students must complete two Understanding Plural Societies courses (3-6 credits total)
- OR**
- One Understanding Plural Societies course (3 credits) and one Cultural Competence course (1-3 credits). Courses fulfilling the Diversity requirement may double count in an approved Distributive Studies category.

## FOUR YEAR PLAN

Now that you understand how to read the degree audit, you are able to move forward into the development of your four year plan. If you've just started here, or you've been here for a few semesters, it's helpful to fill out the four year plan worksheet by reviewing the already existing [4 year plan for Computer Science](#).

This step-by-step goes through the four year plan requirement by requirement rather than inputting everything into each semester. For Steps 1 through 4 we will only be showing the first four semesters.

### STEP 1: FIRST SEMESTER COURSEWORK

The first semester of the four year plan is easy, you just need to copy your course information from your student schedule. While you are filling in your courses, make sure that you are also filling in their corresponding general education requirement(s), if applicable. This will help you keep track as you move through the degree audit.

Fall Semester		
Course	Title	Cr
CMSC131	Object Oriented Programming I	4
MATH140	Calculus I (FSAR, FSMA)	4
ENGL101	Academic Writing (FSAW)	3
GEN ED	Oral Communication (FSOC)	3
Total Credits		14

### STEP 2: COMPUTER SCIENCE (CMSC) SEQUENCE

In the following semesters, you will want to fill in the sequence of Computer Science (CMSC) courses.

#### FIRST YEAR

Fall Semester		
Course	Title	Cr
CMSC131	Object Oriented Programming I	4
MATH140	Calculus I	4
ENGL101	Academic Writing (FSAW)	3
GEN ED	Oral Communication (FSOC)	3
Total Credits		14

Spring Semester		
Course	Title	Cr
CMSC132	Object Oriented Programming II	4
Total Credits		

#### SECOND YEAR

Fall Semester		
Course	Title	Cr
CMSC216	Intro. to Computer Systems	4
CMSC250	Discrete Structures	4
Total Credits		

Spring Semester		
Course	Title	Cr
CMSC330	Organization of Programming Languages	3
CMSC351	Algorithms	3
Total Credits		

### STEP 3: MATH SEQUENCE

Now that we did all 8 semesters of CMSC coursework, we want to input the Math requirements.

#### FIRST YEAR

Fall Semester		
Course	Title	Cr
CMSC131	Object Oriented Programming I	4
MATH140	Calculus I	4
ENGL101	Academic Writing (FSAW)	3
GEN ED	Oral Communication (FSOC)	3
CMSC100	Bits & Bytes of Computer Sci.	1
Total Credits		15

Spring Semester		
Course	Title	Cr
CMSC132	Object Oriented Programming II	4
MATH141	Calculus II	4
Total Credits		

#### SECOND YEAR

Fall Semester		
Course	Title	Cr
CMSC216	Intro. to Computer Systems	4
CMSC250	Discrete Structures	4
MATH2XX	Must have MATH141 prereq.	4
Total Credits		

Spring Semester		
Course	Title	Cr
CMSC330	Organization of Programming Languages	3
CMSC351	Algorithms	3
STAT4XX	Must have MATH141 prereq	3
Total Credits		

## STEP 4: GENERAL EDUCATION REQUIREMENTS

For the General Education portion of the plan, you will want to make sure that you are going down the list on your degree audit of what is incomplete. The examples in Steps 1 – 4 have assumed no prior learning credit (AP/IB/Transfer Credit).

### FIRST YEAR

Fall Semester		
Course	Title	Cr
CMSC131	Object Oriented Programming I	4
MATH140	Calculus I	4
ENGL101	Academic Writing (FSAW)	3
GEN ED	Oral Communication (FSOC)	3
CMSC100	Bits & Bytes of Computer Sci.	1
Total Credits		15

Spring Semester		
Course	Title	Cr
CMSC132	Object Oriented Programming II	4
MATH141	Calculus II	4
GEN ED	Natural Science w/lab	4
GEN ED	History & Social Science (DSHS)	3
Total Credits		15

### SECOND YEAR

Fall Semester		
Course	Title	Cr
CMSC216	Intro. to Computer Systems	4
CMSC250	Discrete Structures	4
MATH2XX	Must have MATH141 prereq.	4
GEN ED	Scholarship in Practice (DSSP)	3
Total Credits		15

Spring Semester		
Course	Title	Cr
CMSC330	Organization of Programming Languages	3
CMSC351	Algorithms	3
STAT4XX	Must have MATH141 prereq	3
GEN ED	Natural Science (DSNS)	3
GEN ED	Humanities (DSHU)	3
Total Credits		15

**STEP 5: UPPER LEVEL CONCENTRATION**

Once all CMSC, MATH, and General Education Requirements are input, you will want to move forward with inputting the Upper Level Concentration requirements.

**THIRD YEAR**

Fall Semester		
Course	Title	Cr
CMSC4XX		3
CMSC4XX		3
GEN ED	History & Social Science (DSHS)	3
GEN ED	Humanities (DSHU)	3
ULC	Upper Level Concentration*	3
Total Credits		15

Spring Semester		
Course	Title	Cr
CMSC4XX		3
CMSC4XX		3
ENGL39X	Professional Writing (FSPW)	3
ULC	Upper Level Concentration*	3
ULC	Upper Level Concentration*	3
Total Credits		15

**FOURTH YEAR**

Fall Semester		
Course	Title	Cr
CMSC4XX		3
CMSC4XX		3
ULC	Upper Level Concentration*	3
GEN ED	Scholarship in Practice (DSSP)	3
Total Credits		

Spring Semester		
Course	Title	Cr
CMSC4XX		3
Total Credits		

## STEP 6: GENERAL ELECTIVES

Officially your degree requirements are all completed for the purposes of the four year plan, however, to be considered full-time at the University of Maryland, you need to be registered for 12 or more credits in a semester. What you will want to do is make sure that you are registered for enough credits every semester to be full-time as well as reach the minimum 120 (or 150 for dual degree) required. To achieve this, you will input "Elective."

### THIRD YEAR

Fall Semester		
Course	Title	Cr
CMSC4XX		3
CMSC4XX		3
GEN ED	History & Social Science (DSHS)	3
GEN ED	Humanities (DSHU)	3
ULC	Upper Level Concentration*	3
Total Credits		15

Spring Semester		
Course	Title	Cr
CMSC4XX		3
CMSC4XX		3
ENGL39X	Professional Writing (FSPW)	3
ULC	Upper Level Concentration*	3
ULC	Upper Level Concentration*	3
Total Credits		15

### FOURTH YEAR

Fall Semester		
Course	Title	Cr
CMSC4XX		3
CMSC4XX		3
ULC	Upper Level Concentration*	3
GEN ED	Scholarship in Practice (DSSP)	3
Elective		3
Total Credits		15

Spring Semester		
Course	Title	Cr
CMSC4XX		3
Elective		3
Elective		3
Elective		3
Elective		3
Total Credits		15



## STEP 7: DOUBLE CHECKING YOUR WORK

Your plan should look something like this once you have completed all steps:

### FIRST YEAR

Fall Semester		
Course	Title	Cr
CMSC131	Object Oriented Programming I	4
MATH140	Calculus I	4
ENGL101	Academic Writing (FSAW)	3
GEN ED	Oral Communication (FSOC)	3
CMSC100	Bits & Bytes of Computer Sci.	1
Total Credits		15

Spring Semester		
Course	Title	Cr
CMSC132	Object Oriented Programming II	4
MATH141	Calculus II	4
GEN ED	Natural Science w/lab (DSNL)	4
GEN ED	History & Social Science (DSHS) <sup>1</sup>	3
Total Credits		15

### SECOND YEAR

Fall Semester		
Course	Title	Cr
CMSC216	Intro. to Computer Systems	4
CMSC250	Discrete Structures	4
MATH2XX	Must have MATH141 prereq.	4
GEN ED	Scholarship in Practice (DSSP)	3
Total Credits		15

Spring Semester		
Course	Title	Cr
CMSC330	Organization of Programming Languages	3
CMSC351	Algorithms	3
STAT4XX	Must have MATH141 prereq	3
GEN ED	Natural Science (DSNS)	3
GEN ED	Humanities (DSHU)	3
Total Credits		15

### THIRD YEAR

Fall Semester		
Course	Title	Cr
CMSC4XX		3
CMSC4XX		3
GEN ED	History & Social Science (DSHS)	3
GEN ED	Humanities (DSHU)	3
ULC	Upper Level Concentration <sup>2</sup>	3
Total Credits		15

Spring Semester		
Course	Title	Cr
CMSC4XX		3
CMSC4XX		3
ENGL39X	Professional Writing (FSPW)	3
ULC	Upper Level Concentration*	3
ULC	Upper Level Concentration*	3
Total Credits		15

### FOURTH YEAR

Fall Semester		
Course	Title	Cr
CMSC4XX		3
CMSC4XX		3
ULC	Upper Level Concentration*	3
GEN ED	Scholarship in Practice (DSSP)	3
Elective		3
Total Credits		15

Spring Semester		
Course	Title	Cr
CMSC4XX		3
Elective		3
Elective		3
Elective		3
Elective		3
Total Credits		15

Remember, this plan will be ever changing throughout your time at the University of Maryland and within the Computer Science department—this is just meant to guide you through the requirements and your time here.

<sup>1</sup> All students must complete two distributive studies courses (DS) that are approved for I-Series (SCIS) courses. The Understanding Plural Societies (UP) and Cultural Competence (CC) courses may also fulfill distributive categories.

<sup>2</sup> Upper Level Concentration must be a minimum of 12 credits outside of CMSC within the same discip