DEAR CLASS OF 2023,

ON BEHALF OF THE FACULTY AND STAFF OF THE SCHOOL OF COMPUTING, I WARMLY WELCOME YOU TO CLEMSON! WE ARE EXCITED TO HAVE YOU AS A STUDENT IN ONE OF OUR UNDERGRADUATE DEGREE PROGRAMS AND LOOK FORWARD TO HELPING YOU ACHIEVE YOUR ACADEMIC GOALS.

AS YOU BEGIN YOUR FIRST SEMESTER AT CLEMSON, PLEASE BE AWARE OF THE RESOURCES AVAILABLE TO HELP YOU MANAGE YOUR ACADEMIC WORKLOAD. EVERY FACULTY MEMBER IN THE SCHOOL OF COMPUTING HAS OFFICE HOURS TO HELP ANSWER QUESTIONS THAT WERE NOT COVERED IN CLASS. TUTORING ASSISTANCE FOR INTRODUCTORY COURSES IS PROVIDED BOTH BY THE SCHOOL OF COMPUTING AND THE ACADEMIC SUCCESS CENTER. YOUR ACADEMIC ADVISOR WILL ALSO BE MEETING WITH YOU TO DISCUSS IMMEDIATE AND LONG-TERM CAREER GOALS.

CLEMSON UNDERGRADUATES ALSO HAVE A WIDE VARIETY OF OPPORTUNITIES TO GET INVOLVED IN RESEARCH PROJECTS THROUGH CREATIVE INQUIRY, GRADED PROJECT COURSES, SENIOR THESIS RESEARCH, SUMMER RESEARCH PROGRAMS, INTERNSHIPS OR PARTICIPATING IN RESEARCH IN ONE OF MANY RESEARCH LABS.

AS WITH ANY MAJOR LIFE TRANSITION, YOUR JOURNEY AT CLEMSON INVOLVES A LEARNING CURVE. OUR UNDERGRADUATE STUDENT SERVICES TEAM HAS ASSEMBLED THIS ORIENTATION MANUAL TO ASSIST YOU IN LEARNING ABOUT THE POLICIES AND PROCEDURES IN THE SCHOOL OF COMPUTING. IN ADDITION, THEY OFFER TIPS AND TRICKS TO MAKE THE MOST OF YOUR EXPERIENCE AT CLEMSON. PLEASE DO NOT HESITATE TO ASK ANY ONE OF OUR ADVISING STAFF IF YOU HAVE ANY QUESTIONS OR CONCERNS.

GO TIGERS!

LARRY F. HODGES, PH.D.
PROFESSOR AND INTERIM DIRECTOR
SCHOOL OF COMPUTING
Any organization will have terminology that differs from another. In this section, we introduce you to some terms you might encounter at Clemson or in this orientation manual.

<table>
<thead>
<tr>
<th>Term</th>
<th>Acronym</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Success Center</td>
<td>ASC</td>
<td>Provides resources for tutoring, workshops, and supplemental instruction. Includes writing center and writing studio services.</td>
</tr>
<tr>
<td>Clemson Computing and Information Technology</td>
<td>CCIT</td>
<td>Clemson’s organization that administers and maintains email, internet, and other campus technology resources.</td>
</tr>
<tr>
<td>Course Map</td>
<td></td>
<td>Semester-by-semester listing of degree requirements including major and general education requirements.</td>
</tr>
<tr>
<td>Computer Science Technical Requirement</td>
<td></td>
<td>Catalog term used to indicate a selected technical elective for the major. This is not a “general elective.”</td>
</tr>
<tr>
<td>Cross Cultural Awareness</td>
<td>CCA</td>
<td>General education requirement to demonstrate the ability to critically compare and contrast cultures in historical and/or contemporary contexts</td>
</tr>
<tr>
<td>CU Navigate</td>
<td></td>
<td>An electronic advising system used to schedule advising appointments and view appointment summaries.</td>
</tr>
<tr>
<td>DegreeWorks</td>
<td></td>
<td>Degree auditing software used by advisors and students to monitor progress to degree completion.</td>
</tr>
<tr>
<td>Duo Security</td>
<td></td>
<td>Name of the two-factor authentication system used to gain access to iROAR and DegreeWorks. See: <a href="https://2fa.app.clemson.edu">https://2fa.app.clemson.edu</a></td>
</tr>
<tr>
<td>Distributed Competencies</td>
<td></td>
<td>Combination of General Education and major coursework to demonstrate critical thinking, ethical judgement, and both written and oral communication.</td>
</tr>
<tr>
<td>Enrolled Student Services</td>
<td>ESS</td>
<td>Department within the Office of the Registrar’s Office that processes course substitutions and performs degree certifications</td>
</tr>
<tr>
<td>iROAR</td>
<td></td>
<td>Name for the Web-based registration, catalog, and student account system, accessible through iROAR or <a href="http://my.clemson.edu">http://my.clemson.edu</a></td>
</tr>
<tr>
<td>Peer-Assisted Learning</td>
<td>PAL</td>
<td>Peer-led study sessions for students in historically difficult courses, provided via the ASC.</td>
</tr>
<tr>
<td>Science, Technology, and Society</td>
<td>STS</td>
<td>General education requirement to demonstrate an understanding of issues created by the complex interactions among science, technology, and society.</td>
</tr>
<tr>
<td>Student Accessibility Services</td>
<td>SAS</td>
<td>Campus resource that coordinates reasonable accommodations for students with identified disabilities</td>
</tr>
<tr>
<td>Transfer Course Evaluation Lookup Table</td>
<td>TCEL</td>
<td>Searchable Web-based interface that indicates evaluated transfer coursework.</td>
</tr>
<tr>
<td>Undergraduate Announcements</td>
<td></td>
<td>Clemson course catalog available at <a href="http://catalog.clemson.edu">http://catalog.clemson.edu</a></td>
</tr>
</tbody>
</table>
GENERAL POLICIES

CONTACT INFORMATION

Each semester, verify that your contact information (including your home/permanent address, local address, and phone numbers) are accurate. You may access the contact information via iROAR or through the My.Clemson Web portal (http://my.clemson.edu). Clemson University and the School of Computing may need to use this information in order to notify you of important information.

E-MAIL AND COMMUNICATION

Email is the official form of communications between you, Clemson University, and the School of Computing. Information about classes, meetings, bills, scholarships, social events, etc. will be sent to your university email address. The School of Computing also maintains email listservs for each major. These listservs are automatically generated each semester with currently enrolled students. Note, if you change your major into a School of Computing degree program later in the semester, your change of major does not typically take effect until the following semester. Be familiar with the following email policies:

- Make sure your Clemson email address is in top operational status (e.g., not over quota, not set up to incorrectly forward email).
- Check your Clemson email address at least once a day.
- Once an email is sent to your Clemson email address, it is considered received.
- All academic-related email between you and Clemson (including your professors, advisors, and administrators) should be sent from your official Clemson email address.
- Note that username@clemson.edu is the official email format used on campus.

If you have trouble with your email account, contact the Help Desk at ITHELP@clemson.edu or 864-656-3494.

TWO-FACTOR AUTHENTICATION AND DUO

As part of Clemson University’s strategic plan to secure sensitive information, two-factor authentication is required in order for students, faculty, and staff to access registration and student record systems such as iROAR and Degree Works. Please make sure you have this completed prior to any times you will need to access these systems (such as for class registration). Visit https://2fa.app.clemson.edu for more information.

FINANCIAL DEADLINES

Pay close attention to paperwork and deadline requirements for Student Financial Services. If you do not pay all of your fees by the date due, the Registrar will cancel your entire schedule. You should also make sure that you have met all of the deadlines and paperwork requirements for scholarships – your schedule will be canceled if the scholarship is delayed. There is no guarantee that you will be able to get back into the same classes after your schedule is canceled. A canceled schedule will result in a major and stressful hassle that you want to avoid.
LAPTOP REQUIREMENT

Clemson University requires all students to have a laptop and Clemson’s Computer and Information Technology (CCIT) department publishes a list of recommended laptops (http://www.clemson.edu/ccit/help_support/laptops/). Please see http://computing.clemson.edu/laptops for additional guidance for choosing a laptop for use within the School of Computing.

STUDENT ISSUES / CONCERNS

Clemson University and the School of Computing have mechanisms to help resolve student concerns, which may include (but are not limited to):

- Academic Forgiveness
- Medical issues
- Withdrawing out of classes

The School of Computing advises students to schedule a meeting with their academic advisor or the Undergraduate Program Coordinator to discuss the issue and determine the best route of action to take. For issues with grade disputes, we recommend you first discuss your concerns with your course instructor first.

STUDENT ORGANIZATIONS

Students in the School of Computing have several extra-curricular organizations available to join. For more information on when meetings occur (or how to join an organization), please visit the Undergraduate Programs part of the School of Computing Website.

Clemson University’s ACM Chapter is a professional and social organization that works to bring the department together as a community and helps bring opportunities to its members. Members pay $20 a year for dues. The organization’s activities include company speakers, career workshops, social activities (such as barbecues, bowling, wings at Explorer’s, and more), and more. ACM is an excellent opportunity for freshmen to meet other students in their major. The people you meet in ACM will be more than willing to help you along the way to your degree, and you will have some fun in the process.

Students in the School of Computing are in the process of starting the ACM-W chapter for Clemson. ACM-W is a global organization that supports, celebrates and advocates for Women in Computing. Our local chapter will promote all these goals and build a community for female students in the School of Computing that fosters collaboration, mentorship programs and celebrates diversity.

The Clemson University Cyber Security team seeks to actively expand the resources available to students with an interest in Cyber Security providing the tools and skills used in the cyber security industry. We accomplish these goals by training in simulated environments to harden computer security utilizing real world stratagems and compete in “capture the flag” competitions that are an offensive assault on a computer network.

Upsilon Pi Epsilon (UPE) is the international honor society for the computing sciences. The organization is invitation only and does inductions each semester. The requirements differ for each class. As a sophomore, you must have an overall GPA of 3.0 or higher, a computer science GPA of 3.75 or higher, and at least 15 hours of computer science credit. As a junior, you must have an overall GPA of 3.00 or higher, a computer science GPA of 3.50 or higher, and at least 15 hours of computer science credit. For seniors, you must have an overall GPA of 3.0 or higher,
a computer science GPA of 3.50 or higher, and at least 15 hours of
coursework and grade
requirements (typically C or higher in major coursework—please see the Undergraduate
Announcements for the exact requirements for your degree).

**ACADEMIC POLICIES**

**MANAGING YOUR ACADEMIC CAREER**

Advisors from the School of Computing’s Academic Services help you with course and career planning, but ultimately you are responsible for your academic careers. That is, you as a student are responsible for fulfilling the relevant requirements of your degree, which includes required coursework and grade requirements (typically C or higher in major coursework—please see the Undergraduate Announcements for the exact requirements for your degree).

Pro-Tip: Use this folder to store your important registration/academic information. Keep it in a safe place. Each semester, as you prepare to register for the following semester, all your materials will be in one place.

**ACADEMIC ADVISING POLICY**

The School of Computing requires all of its declared majors to meet with an academic advisor prior to receiving your semester PIN for class registration. Students should come to their academic advising appointments prepared (e.g., reviewed their DegreeWorks progress, assembled a list of potential courses to take). Due to a limited number of advising appointments, any student who fails to show up to a scheduled advising appointment may be restricted from scheduling any other appointments and will need to come during their advisor’s walk-in/office hours. If you know in advance that you are unable to make your appointment, please cancel the appointment and notify your advisor ahead of time. Academic and career advisement requires a dialog between the advisor and advisee; as a result, students are required to be advised in-person.

**SHADOW MAJOR POLICY**

While the School of Computing major is considered an “open major”, several other majors on campus are “closed”, such as economics or mechanical engineering. If you decide that a School of Computing major is not the right fit for you and wish to change majors to a closed major, you will still need to receive your PIN for registration by your School of Computing advisor until you are admitted into the major. Your advisor will not give you this PIN unless you provide evidence that you have spoken to someone in your intended major for advisement.

**ADVISING STAFF**

<table>
<thead>
<tr>
<th>Advisor</th>
<th>Title</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Chris Plaue</td>
<td>Undergraduate Program Coordinator &amp; Academic Advisor</td>
<td><a href="mailto:cplaue@clemson.edu">cplaue@clemson.edu</a></td>
</tr>
<tr>
<td>Ms. Kristi Cabrera</td>
<td>Associate Coordinator &amp; Academic Advisor</td>
<td><a href="mailto:kcabrer@clemson.edu">kcabrer@clemson.edu</a></td>
</tr>
<tr>
<td>Ms. Amanda Menefee</td>
<td>Associate Coordinator &amp; Academic Advisor</td>
<td><a href="mailto:menefee@clemson.edu">menefee@clemson.edu</a></td>
</tr>
<tr>
<td>Dr. Yvon Feaster</td>
<td>Lecturer &amp; Academic Advisor</td>
<td><a href="mailto:yfeaste@clemson.edu">yfeaste@clemson.edu</a></td>
</tr>
<tr>
<td>Mr. Roger Van Scoy</td>
<td>Lecturer &amp; Academic Advisor</td>
<td><a href="mailto:vanscov@clemson.edu">vanscov@clemson.edu</a></td>
</tr>
<tr>
<td>Mr. Sami Sun</td>
<td>Lecturer &amp; Academic Advisor</td>
<td><a href="mailto:yushans@clemson.edu">yushans@clemson.edu</a></td>
</tr>
</tbody>
</table>
Mr. Kevin Plis  | Lecturer & Academic Advisor  | kplis@clemson.edu

The advising team for the School of Computing is listed above. To view your assigned advisor, log into DegreeWorks via iROAR and check the Advisor field. As you progress along your degree, we may reassign you to a new advisor who can offer you additional insight into your intended career path.

Each semester, we notify students via email of when to start signing up for advising appointments. Refer to the directions in the email on how to use the online appointment system to schedule an appointment. If you need to schedule an appointment outside of pre-registration advising, you may email your advisor at the address above.

**School of Computing undergraduates are typically re-assigned to a School of Computing faculty advisor once the student has completed his or her 2000-level CPSC coursework. This allows a student to be able to discuss specialization options, technical electives with an advisor who has an advanced degree in computer science (or a closely related discipline).**

**REGISTERING FOR CLASSES**

Students are assigned specific days and times ("time tickets") in which they may use iROAR to register for classes. You are able to check your time by logging into iROAR, clicking on Student, then Registration. Time tickets are determined on earned credit hours plus the hours in which you are currently enrolled in.

Before you attempt to register for classes, you should log into iROAR and check your "Registration Status" to determine if you have any holds that prevent you from registration. Holds may result from not paying your tuition and fees, a health services bill, an unpaid parking ticket, or similar situation. Typically, a contact phone number is displayed next to the hold.

Please note that once you register for your classes, academic departments (including the School of Computing) reserve the right to manage enrollment. This means that courses can be canceled for low enrollment, an over-enrolled course may be split into multiple sections, an instructor can be reassigned to a different course, etc. Signing up for a class section with an instructor is not a guarantee of that instructor teaching the course. In extremely rare instances, a class time may need to be changed due to a mitigating circumstance.

In exceptional situations involving an over-enrolled course, we may create an additional section of the class at an alternate time. We may first ask for volunteers to move to the new section but the School of Computing does reserve the right to move you into a new section if your schedule permits. Our goal is to ensure that all students are provided access to required courses to graduate on-time and to reduce class sizes if possible.

**CREATING YOUR ACADEMIC SCHEDULE**

**CHOOSING YOUR COMPUTER SCIENCE COURSE**

Your CMPT score, AP or transfer credit, and background determine your first course in Computer Science:
<table>
<thead>
<tr>
<th>Test</th>
<th>Score</th>
<th>Course</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>AP Computer Science AB (not currently offered by AP; listed for historical purposes)</td>
<td>5+C</td>
<td>CPSC 2120</td>
<td>See advisor for details. Placing into this course requires additional knowledge.</td>
</tr>
<tr>
<td></td>
<td>3-4</td>
<td>CPSC 1070</td>
<td>Accelerated course in C/C++.</td>
</tr>
<tr>
<td>AP Computer Science A</td>
<td>3-5</td>
<td>CPSC 1070</td>
<td>Accelerated course in C/C++.</td>
</tr>
<tr>
<td>AP Computer Science Principles</td>
<td>3-5</td>
<td>CPSC 1210</td>
<td></td>
</tr>
<tr>
<td>CMPT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>60-100</td>
<td>CPSC 1010</td>
<td>Introduction to programming and C</td>
</tr>
<tr>
<td></td>
<td></td>
<td>or CPSC 1060</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0-59</td>
<td>CPSC 1040</td>
<td>Introduction to the concepts and logic of programming or computational thinking</td>
</tr>
<tr>
<td></td>
<td></td>
<td>or CPSC 1210</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** CPSC 1040 and CPSC 1210 are introductions to programming and prepares students for CPSC 1010 focusing on problem solving skills within the context of programming logic and concepts. Even if you qualify for CPSC 1010 or 1060, you may still want to consider starting in CPSC 1040 or CPSC 1210. You should still be able to complete the program in 4 years.

**CHOOSING YOUR COURSES**

**MATHEMATICS**

Your selection of the first math class to start with is determined by:

1. score on the Clemson Math Placement Test (CMPT)
2. choice of major (CS versus CIS or BA)
3. AP and/or transfer courses

There are two calculus tracks available depending on your major:

- MATH 1060 & MATH 1080: calculus oriented towards science & engineering problems
- MATH 1020 & MATH 2070: calculus oriented towards business applications

Students who are in the Bachelor of Science in Computer Science (BS-CS) degree MUST take the MATH 1060 & 1080 track. Students enrolled in the Bachelor of Science in Computer Information Systems (BS-CIS) or the Bachelor of Arts in Computer Science (BA-CS) degree may take either track. A BA-CS or BS-CIS student who wants to keep his/her options open for transferring to the BS-CS major, or a BA-CS or BS-CIS student who may later take the graphics courses and/or who is interested in the graduate program in Digital Production Arts should also take the MATH 1060/1080 track.

Based on your CMPT score you may need to take a preparatory course before starting MATH 1020 (e.g. MATH 1990) or 1060 (e.g. MATH 1040 or 1050).

<table>
<thead>
<tr>
<th>Test</th>
<th>Score</th>
<th>MATH 1060/1080 Track Placement (BS-CS/CIS/BA-CS)</th>
<th>MATH 1020/2070 Track Placement (CIS/BA-CS Only)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calculus AB</td>
<td>4-5</td>
<td>MATH 1080</td>
<td>MATH 2070</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>MATH 1060</td>
<td>MATH 2070</td>
</tr>
<tr>
<td>Calculus BC</td>
<td>3-5</td>
<td>Upper-level MATH requirements</td>
<td>Upper-level MATH requirements</td>
</tr>
<tr>
<td>CMPT</td>
<td>80-100</td>
<td>MATH 1060</td>
<td>MATH 1020</td>
</tr>
<tr>
<td></td>
<td>65-79</td>
<td>MATH 1040</td>
<td>MATH 1020</td>
</tr>
<tr>
<td></td>
<td>60-64</td>
<td>MATH 1050</td>
<td>MATH 1020</td>
</tr>
</tbody>
</table>
The Orientation Planning Sheet will assist you in determining which fall math course you should register.

**NATURAL SCIENCE COURSES**

Your natural science options are related to your major. If you are a BS-CIS or BA-CS major but later switch to the CS degree program, the science you select now can be used as part of the 14 hours of natural science required by the CS program – so you do not need to worry about that at this point. If you are interested in eventually entering the Digital Production Arts graduate program, the Physics with Calculus sequence is recommended, which starts with PHYS 1220/1240.

**BACHELOR OF SCIENCE IN COMPUTER SCIENCE (BS-CS)**

The BS-CS requires 8 hours selected from the same science with labs, and an additional 6 hours selected from the same or other sciences. You must select the first course of the 8-hour sequence from the following:

<table>
<thead>
<tr>
<th>Science</th>
<th>Lecture</th>
<th>Lab</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology</td>
<td>BIOL 1030 BIOL 1100</td>
<td>BIOL 1050 BIOL 1101</td>
<td>Standard introduction to Biology Generally premed/biology majors</td>
</tr>
<tr>
<td>Chemistry</td>
<td>CH 1010</td>
<td>CH 1011</td>
<td>Standard introduction to Chemistry*</td>
</tr>
<tr>
<td>Geology</td>
<td>GEOL 1010</td>
<td>GEOL 1030</td>
<td>Standard Introduction to Geology</td>
</tr>
<tr>
<td>Physics</td>
<td>PHYS 1220</td>
<td>PHYS 1240</td>
<td>Calculus based physics, must have completed MATH 1060</td>
</tr>
</tbody>
</table>

*See catalog for pre-reqs which include a score a 60 or better on the CMPT or concurrent enrollment in specific MATH-prefixied courses.

**Note:** If you are a BS-CS major, you could also select any of the courses below for the BS-CIS or BA-CS program. These would become part of the additional 6 hours of natural science you need to take. You will eventually have to complete a two-semester sequence (8 hours) with labs that starts with one of the courses above. In addition, if you take CH 1050 or PHYS 2070/2090, you cannot then take CH 1010 or PHYS 1220/1240 without losing credit (credit can only be earned for one of the two options).

**BACHELOR OF SCIENCE IN COMPUTER INFORMATION SYSTEMS (BS-CIS)**

**BACHELOR OF ARTS IN COMPUTER SCIENCE (BA-CS)**

The BS-CIS and BA-CS programs require 7 hours of natural science. One course must include a lab and you should select from the following table:

<table>
<thead>
<tr>
<th>Science</th>
<th>Lecture</th>
<th>Lab</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology</td>
<td>BIOL 1030 BIOL 1100</td>
<td>BIOL 1050 BIOL 1101</td>
<td>Standard introduction to Biology Generally premed/biology majors</td>
</tr>
<tr>
<td></td>
<td>BIOL 1220</td>
<td></td>
<td>Keys to Biodiversity</td>
</tr>
<tr>
<td>Chemistry</td>
<td>CH 1010</td>
<td>CH 1011</td>
<td>Standard introduction to Chemistry*</td>
</tr>
<tr>
<td>Geology</td>
<td>GEOL 1010</td>
<td>GEOL 1030</td>
<td>Standard introduction to Geology</td>
</tr>
<tr>
<td>Physics</td>
<td>PHYS 1220</td>
<td>PHYS 1240</td>
<td>Calculus-based physics, have completed MATH 1060</td>
</tr>
<tr>
<td>------------------</td>
<td>-----------</td>
<td>-----------</td>
<td>-------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>PHYS 2070</td>
<td>PHYS 2090</td>
<td>Physics in everyday life</td>
</tr>
</tbody>
</table>

*See catalog for pre-reqs which include a score a 60 or better on the CMPT or concurrent enrollment in specific MATH-prefix ed courses.

**Note:** Astronomy (ASTR) and Physical Science (PHSC) courses may **not** be used to satisfy the natural science requirement for any of the three degrees.

### HUMANITIES & SOCIAL SCIENCE COURSES

**BS-CS:** In addition to English and literature requirements, you must complete 15 additional hours from the university-approved list of which 3 hours are from the humanities (non-literature), 6 hours are from the social sciences, and an additional 6 hours are from either the humanities or the social sciences.

**BA-CS:** In addition to English and literature requirements, you must complete 15 additional hours from the university approved list of which 3 hours are from the humanities, 6 hours are from the social sciences, 3 hours from either the humanities or the social sciences and an additional 3 hours from the Fine Arts.

**BS-CIS:** In addition to English and literature requirements, you must complete 12 additional hours from the university-approved list of which 3 hours are from the humanities (non-literature), 6 hours are from the social sciences, and an additional 3 hours are from either the humanities or the social sciences.

There is no “best” humanity or social science courses for majors in our department, you should read the catalog descriptions and pick the courses that best fit your interests. Refer to your Undergraduate Announcements for course descriptions. Your selection may also be governed by your interest in fulfilling the CCA and STS requirements (see below).

### CROSS-CULTURAL AWARENESS (CCA)

### SCIENCE, TECHNOLOGY, & SOCIETY (STS)

Generally speaking, you may “double-dip” between the Cross-Cultural Awareness (CCA) and Science, Technology, & Society (STS) general education requirements with another general education requirement as long as you maintain the 33 minimum hours of general education coursework. For instance, many computer science majors will select one Humanities or Social Science course from the university-approved list to satisfy the CCA general education requirement and/or one Humanities or Social Science course from the university approved list to satisfy the STS general education requirement. See your Undergraduate Announcements for courses currently certified for CCA and STS content.

### MODERN LANGUAGE (BA-CS REQUIREMENT)

If you are in the BA-CS program, you will need 4 semesters proficiency of the same language (14 hours). If you choose a language that you did not have in high school, you would start with the 1010 level course. If you are continuing with a language that you had in high school, you must take the placement test and your registration packet will include the Language Department’s recommendation for placement. Generally if you complete the recommended course with a ‘C’ or better you will receive credit for the previous courses (e.g. if you are placed in SPAN 102 and make a ‘C’ or better, you will also receive credit for SPAN 1010). New first year and transfer students **must** take the Modern
Language Placement Test (MLPT) prior to registration if possible. You will not be allowed to remain in a lower level course than determined by their MLPT score. The MLPT is required only for those students with experience in a language in which they intend to continue. Information about the placement exams can be found at https://www.clemson.edu/caah/departments/languages/resources/placement-test.html.

COOPERATIVE EDUCATION & INTERNSHIPS

Cooperative Education is an optional multi-year program of work and study alternating between academic terms. The program is managed by the Cooperative Education Office (316 Hendrix Student Center) and you must contact them about application procedures.

Internships are work experiences and can be on a paid or unpaid basis. A central listing of internships is maintained by the Michelin Career Center (316 Hendrix Student Center) and at: http://career.clemson.edu/internship programs).

As with the Co-Op program, you must register to participate.

None of the School of Computing undergraduate degree programs require a cooperative education or internship experience. However, if you are interested in a cooperative education or internship experience, please consult your academic advisor and the Michelin Career Centers.

ADVICE FROM UPPERCLASSMEN

What piece of advice would you give to a student who wants to pursue a CS or CIS degree?

- “Don't be afraid to ask questions. Get to know the people in your class (their help with be invaluable, especially once you get to a group project). Always try to go to office hours.”
- “Start working early on projects. Even if you are someone who has coded their entire life and think you can get the project done in fifteen minutes, get into the habit of starting work as soon as possible, because your classes will become more challenging, and you'll always regret not starting sooner.”
- “Don't choose CS or CIS because of the income. You need to have passion for learning the material presented, because it clearly shows to future employers and your peers when you don't know what you are doing. Computer science is a field you need to constantly invest time into; it's not a memorization field of study. In order to do well and succeed, you need to always challenge yourself and always be willing to learn.”

What helped you do well in the toughest CPSC-prefixed courses?

- “Learn the concepts and practice outside of class. Memorizing at the last minute is not helpful in a lot of the classes. You can start from the concepts and derive everything else you need to know, and the practice will help you do that.”
- “Go to class. Work ahead of deadlines to give yourself ample time for questions and feedback, and don’t be afraid to ask for help when you truly need it.”
• “It helps to work with instructors/professors to really understand the material on a personal level. Make sure to ask questions during and outside of class as well as engage with material on a real level.”

What can students do to get the most out of academic advisement?

• “Always schedule a time to meet with advisors as soon as you get a notification to do so. Don't let registration sneak up on you.”
• “Take it serious and plan your time here as much as possible. Go into advising with a plan.”
• “Ask questions. Have a plan before stepping into someone's office - don't come into advising expecting your advisor to do all the work for you.”

What resources did you use to help you find a job or internship?

• “LinkedIn and Clemson's JobLink are great tools to use.”
• “Michelin Career Center, the Internet, and Employer interest meetings on campus are great ways to find leads or make connections.”
• “Go to the career fairs, even if you know for sure you won't get a job, go to them and get a feel for the environment. You'll be more prepared when you go to the career fair later in your career at Clemson. Go to the company events that the School of Computing hosts. It is a more intimate setting and you are more likely to get a job there.”

What mistakes do CPSC or CIS majors typically make? What would you recommend to new students so they can avoid common mistakes?

• “In my experience, perhaps the most common mistake I've made is putting off working on assignments and/or asking for help on things that I'm stuck on. I would recommend to new students that they get started on assignments early so that they have time to work through difficulties, and don't be afraid to ask for help.”
• “Try to balance CPSC courses and non-CPSC courses. Too many CPSC classes at once is hard and raises the likelihood of failure.”
• “If you have coding knowledge, don't slack off. Things may seem easy now, but get in the practice of brainstorming before you power house into coding. Get in the practice of starting sooner, going to office hours and keeping detailed comments and notes. For people who haven't had coding knowledge prior to coming to college, work hard and look into online resources. It may seem like everyone else around you is so far ahead, but you can make it I promise you. You will improve and your hard work will pay off. Look online for different teaching methods, go to ASC tutoring sessions, and make use of your TAs and professor office hours. Most students who feel they know what they are doing might not use these resources, but it will help you in the long run.”

What extracurricular activities, events, organizations, etc., would you recommend to new students and why?

• “Take a leisure skills course; it's a good way to balance your class load and not be overwhelmed with actual academic courses. I've been in band for a long time, so band was also a great outlet for me to get away from academics.”
• “I found the Business Writing course I took to be somewhat helpful for writing resumes and career planning.”
• “I took an Intro to Logic class through the philosophy department that literally teaches you how to think like a computer. It is a very interesting way to think about logic statements. I really enjoyed the classes I took in the English department (2130 British lit, 3570 film) and they helped me improve my writing skills and other communication skills which can be very important in resume writing, research papers etc.”

**What extracurricular activities, events, organizations, etc., would you recommend to new students and why?**

• “CU Cyber. We're focused on helping people apply the knowledge they learn in their intro (and later) CPSC courses towards complex cybersecurity topics. It will help them build a real-world skill-set that is significantly hard to come by.”
• “Both ACM and ACM-W chapters because they are filled with great people who are always willing to talk and help out”
• “Go to Tiger Prowl when it happens and actually talk to some organizations that seem interesting. Also, check Tiger Quest, it has almost every student organization listed there with a description and usually has up to date contact information for officers in those clubs/organizations. Go to events during E-Week, Black History Month, Pride Week, International Festival, Literary Festival, etc. There are so many interesting and cool events that have free things available that showcase the amazing work that students do and things that you can get involved with as well. The Barnes Center has events happening every Friday (Mock Turtle Soup comedy shows) and the Brooks Center has some events free for students and all of them have student discounts.”

**CONCLUDING REMARKS**

We sincerely welcome you to the School of Computing family! At this point, you may feel a bit overwhelmed by all the information presented in both campus orientation and here within the School. We offer several final pieces of advice to help with your transition to Clemson:

• Your *Undergraduate Announcements* is important. Make sure you read through and are familiar with the policies presented. Note that you can always find a PDF version on the Registrar’s Web site
• The School of Computing Web site ([http://www.clemson.edu/computing](http://www.clemson.edu/computing)) is filled with lots of valuable information and advice. Much of the information presented during your School of Computing orientation is available under the Incoming Students section of the Undergraduate Programs page.
• Prior to making a major academic decision (such as withdrawing out of a class), schedule an appointment with your academic advisor so that you understand the impact on your academic standing.
• During the first week of classes, write down the office hours (sometimes called “walk in hours”) of your course instructors and your advisors.
• Make sure you can log into iROAR before you register for classes.
• While you can hope for the “ideal” schedule, you must be flexible as you may find some sections full. In order to stay on track for your first semester at Clemson, you typically should plan to take an English course, a math course, a natural science and a computer science course. If you encounter a problem registering for a computer science course, see the advising team.
• Know ahead of time what alternate courses you may want to take in case some of your first choices are not available.
The day after you register for classes, log into DegreeWorks and make sure your courses are counting where you expect them to be. If they are not, please contact your advisor.
### Bachelor of Science in Computer Science

**DEGREE REQUIREMENTS AY19-20**

#### Freshman Year

**First Semester – 15 hours**
- 3 – ENGL 1030 Rhetoric and Composition
- 4 – MATH 1060 Calculus of One Variable I
- 4 – Introduction to Computing Requirement
- 4 – Natural Science Requirement

**Second Semester – 15 hours**
- 4 – MATH 1080 Calculus of One Variable II
- 3 – Arts and Humanities (Non-Lit) Requirement
- 4 – Introduction to Computing Requirement
- 4 – Natural Science Requirement

#### Sophomore Year

**First Semester – 16 hours**
- 3 – CPSC 2070 Discrete Structures for Computing
- 4 – CPSC 2120 Algorithms and Data Structures
- 3 – Arts and Humanities (Literature) Requirement
- 3 – Natural Science Requirement
- 3 – Oral Communications Requirement

**Second Semester – 16 hours**
- 3 – CPSC 2150 Software Development Foundations
- 4 – CPSC 2310 Intro. to Computer Organization
- 1 – CPSC 2910 Seminar in Professional Issues I
- 3 – STAT 3090 Introductory Business Statistics
- 3 – Natural Science Requirement
- 2 – Elective

#### Junior Year

**First Semester – 15 hours**
- 3 – CPSC 3300 Computer Systems Organization
- 3 – CPSC 3600 Networks and Network Program.
- 3 – CPSC 3720 Intro. to Software Engineering
- 3 – MATH 3110 Linear Algebra
- 3 – Social Science Requirement

**Second Semester – 15 hours**
- 3 – CPSC 3220 Introduction to Operating Systems
- 3 – Breadth Requirement
- 3 – Computer Science Technical Requirement
- 3 – Social Science Requirement
- 3 – Theory Requirement

#### Senior Year

**First Semester – 15 hours**
- 3 - CPSC 3520 Programming Systems
- 6 – Computer Science Technical Requirement
- 3 – Writing Requirement
- 3 – Elective

**Second Semester – 15 hours**
- 3 – CPSC 4910 Seminar in Professional Issues II
- 3 – Breadth Requirement
- 6 – Computer Science Technical Requirement
- 3 – Elective

**122 Total Semester Hours**

1. Select either the CPSC 1010 and 1020 sequence, or the CPSC 1060 and 1070 sequence. The sequence of CPSC 1110 and 1020 is also acceptable with one elective credit taken in the first semester.

2. Two-semester sequence in the same physical or biological science, each including a laboratory, is required. Select from BIOL 1030/1050, 1040/1060; 1100, 1110; CH 1010, 1020; GEOL 1010/1030 and 2020 or 1120/1140; PHYS 1220/1240, 2210/2230. The six remaining hours may be selected from BIOL, BCHM, CH, GEOL, MICR, PHYS; or ENSP 2000. Excess credits in the lab sciences can apply to the remaining science requirements.

3. See General Education Requirements.

4. MATH 1190 may be substituted.

5. Select from: COMM 1500, 2500, HON 2230; or the cluster of courses AS 3090, 3100, 4090, 4100; or ML 1010, 1020.

6. MATH 3020 or STAT 3300 may be substituted.

7. Select from courses in AAH, ANTH, ART, CHIN, COMM, DANC, EAS, ECON, ENGL, FR, GEOG, GER, HIST, HUM, ITAL, JAPN, MUSC, PA, PAS, PHIL, POSC, REL, RUSS, SOC, SPAN, THEA, WS. Courses selected to satisfy this requirement may not be used to satisfy the Communication; Mathematical, Scientific and Technology Literacy; Arts and Humanities; or Social Sciences General Education Requirements.

8. Select from courses in AAH, ANTH, ART, CHIN, COMM, DANC, EAS, ECON, ENGL, FR, GEOG, GER, HIST, HUM, ITAL, JAPN, MUSC, PA, PAS, PHIL, POSC, REL, RUSS, SOC, SPAN, THEA, WS. Courses selected to satisfy this requirement may not be used to satisfy the Communication; Mathematical, Scientific and Technology Literacy; Arts and Humanities; or Social Sciences General Education Requirements.

9. Select from courses in AAH, ANTH, ART, CHIN, COMM, DANC, EAS, ECON, ENGL, FR, GEOG, GER, HIST, HUM, ITAL, JAPN, MUSC, PA, PAS, PHIL, POSC, REL, RUSS, SOC, SPAN, THEA, WS. Courses selected to satisfy this requirement may not be used to satisfy the Communication; Mathematical, Scientific and Technology Literacy; Arts and Humanities; or Social Sciences General Education Requirements.

10. Select from: ENGL 3040, 3120, 3140, 3150, 3160, 3330.

**Notes:**

1. For graduation, a candidate for the BS degree in Computer Science must have earned a grade of C or better in each CPSC course applied to the non-elective requirements of the degree.

2. A grade of C or better must be earned in all prerequisite courses (including CPSC and MATH courses) before enrolling in the next CPSC course.

3. General Education Cross-Cultural Awareness and Science and Technology in Society requirements must be satisfied.
**Bachelor of Science in Computer Information Systems**

**Freshman Year**

**First Semester – 15 hours**

3 – ENGL 1030 Composition and Rhetoric
3 – MATH 1020 Business Calculus I or
   4 – MATH 1060 Calculus of One Variable I
4 – Introduction to Computing Requirement
1 – Elective

**Second Semester – 17 hours**

4 – Introduction to Computing Requirement
3 – MATH 2070 Business Calculus II or
   4 - MATH 1080 Calculus of One Variable II
3 – Arts and Humanities (Non-lit.) Requirement
3 – Natural Science Requirement
3 – Social Science Requirement
1 – Elective

**Sophomore Year**

**First Semester – 16 hours**

3 – CPSC 2070 Discrete Structures for Computing
4 – CPSC 2120 Algorithms and Data Structures
3 – Arts and Humanities (Literature) Requirement
3 – Oral Communications Requirement
3 – Social Science Requirement

**Second Semester – 14 hours**

3 – CPSC 2150 Software Development Foundations
4 – CPSC 2310 Intro. to Computer Organization
1 – CPSC 2910 Seminar in Professional Issues I
3 – MGT 2010 Principles of Management
3 – STAT 3090 Introductory Business Statistics

**Junior Year**

**First Semester – 15 hours**

3 – CPSC 2200 Microcomputer Applications
3 – CPSC 3220 Introduction to Operating Systems
3 – CPSC 3720 Intro. to Software Engineering
3 – Writing Requirement

**Second Semester – 15 hours**

3 – ACCT 2020 Managerial Accounting Concepts
3 – CPSC 3600 Networks and Network Programming
3 – CPSC 3710 System Analysis or
   3 – MGT 4520 Systems Analysis and Design
3 – Computer Science Technical Requirement
3 – Economics Requirement

**Senior Year**

**First Semester – 15 hours**

3 – CPSC 4200 Computer Security Principles or
   3 – CPSC 4240 System Admin. and Security
3 – CPSC 4620 Database Management Systems
3 – CPSC 4910 Seminar in Professional Issues II
3 – Business Requirement
3 – Computer Science Technical Requirement
3 – Information Systems Requirement

**Second Semester – 15 hours**

3 – MGT 3120 Decision Models for Management
3 – MKT 3010 Principles of Marketing
3 – Business Requirement
3 – Computer Science Technical Requirement
3 – Information Systems Requirement

**122 Total Semester Hours**

1 Select either the MATH 1020/2070, 1060/2070 or 1060/1080 sequences. Students who select the 1060/1080 sequence will have satisfied the two elective credits in the freshman year.
2 Select either CPSC 1010 and 1020, or CPSC 1060 and 1070. CPSC 1110 and 1020 is also acceptable with one elective credit in the first semester.
3 Select from courses in BIOL, BCHM, CH, GEOL, MICR, PHYS, or ENSP 2000. At least one course must include a laboratory and satisfy the Natural Science General Education requirement.
4 See General Education Requirements.
5 Or MATH 1190.
6 One course of: ENGL 3040, 3120, 3140, 3150, 3160, 3330.
7 Select from courses to satisfy this requirement may not also be used to satisfy other major requirements.
8 Select from courses to satisfy this requirement may not also be used to satisfy the General Education Social Science Requirement.
9 Select from MGT 3900, 4000 and FIN 3060.
10 Select from MGT 4520, 4540, 4550, 4560, or any 4000-level CPSC course.
11 CPSC 4810 may not be used.
12 Courses selected to satisfy this requirement may not also be used to satisfy other major requirements.

Notes:
1. For graduation, a candidate for the BS degree in Computer Information Systems must have earned a grade of C or better in each CPSC course applied to the non-elective requirements of the degree.
2. A grade of C or better must be earned in all prerequisite courses (including CPSC and MATH courses) before enrolling in the next CPSC course.
3. General Education Cross-Cultural Awareness and Science and Technology in Society requirements must be satisfied.
DEGREE REQUIREMENTS AY19-20

Bachelor of Arts in Computer Science

**Freshman Year**
First Semester – 15 hours
3 – ENGL 1030 Accelerated Composition
3 – MATH 1020 Business Calculus I
3 – MATH 1060 Calculus of One Variable I
4 – Modern Language Requirement
4 – Introduction to Computing Requirement
1 – Elective

Second Semester – 15 hours
4 – Introduction to Computing Requirement
3 – MATH 2070 Business Calculus II or
4 – MATH 1080 Calculus of One Variable II
3 – Arts and Humanities (Non-Lit.) Requirement
4 – Modern Language Requirement
1 – Elective

**Sophomore Year**
First Semester – 16 hours
3 – CPSC 2070 Discrete Structures for Computing
4 – CPSC 2120 Algorithms and Data Structures
3 – Arts and Humanities (Literature) Requirement
3 – Modern Language Requirement
3 – Oral Communications Requirement
Second Semester – 14 hours
3 – CPSC 2150 Software Development Foundations
4 – CPSC 2310 Intro. to Computer Organization
3 – CPSC 2920 Computing, Ethics, and Global Society
3 – Modern Language Requirement
1 – Elective

**Junior Year**
First Semester – 15 hours
6 – Computer Science Technical Requirement
3 – STAT 3090 Introductory Business Statistics
3 – Minor Requirement
3 – Natural Science Requirement
Second Semester – 16 hours
3 – Computer Science Technical Requirement
3 – Minor Requirement
3 – Social Science Requirement
3 – Writing Requirement
4 – Natural Science Requirement

**Senior Year**
First Semester – 15 hours
6 – Computer Science Technical Requirement
3 – Departmental Humanities Requirement
3 – Minor Requirement
3 – Social Science Requirement

Second Semester – 15 hours
6 – Computer Science Requirement
3 – Fine Arts Requirement
6 – Minor Requirement

**121 Total Semester Hours**

1. Select either the MATH 1020/2070, 1060/2070 or 1060/1080 sequence. Students who select the 1060/1080 sequence will have satisfied the elective credits in the freshman year. Students interested in computer graphics should select the 1060/1080 sequence.
2. Students must complete through 2020 in a modern language. See Modern Language Requirements at Clemson University statement in Academic Regulations.
5. MATH 1190 or MATH 4190 may be substituted.
6. One course of: COMM 1500, 2500, HON 2230; or the cluster of courses AS 3090, 3100, 4090, 4100; or ML 1010, 1020.
7. CPSC 2920 satisfies the Science and Technology in Society General Education Requirement.
8. MATH 3020, MATH 3110, STAT 3300, or transfer credit for MATH 3010. MATH 3110 is required for computer graphics courses.
9. Select from 3000-level or higher CPSC courses. No more than three credits of CPSC 3990 or 4810 may be used, and no more than six credits of CPSC 4820 may be used. Up to three credits of ECE 3000-level or higher; or MATH 3650; or MATH 4000-level may be used.
10. Select from courses in BIOL, BCHM, CH, GEOL, MICR, PHYS; or ENSP 2000. At least one course must include a laboratory and satisfy the Natural Science General Education requirement.
11. One course of: ENGL 3040, 3120, 3140, 3150, 3160, 3330
12. Select from courses in AAH, ANTH, ART, CHIN, DANC, ENGL, FR, GER, HUM, ITAL, JAPN, MUSC, PA, PHIL, REL, RUSS, SPAN, THEA. A course selected to satisfy this requirement may not also be used to satisfy the Fine Arts Requirement or the Communication; Mathematical, Scientific and Technological Literacy; Arts and Humanities; or Social Sciences General Education Requirements.
13. MUSC 2100 or any course in AAH, ART, or THEA. A course selected to satisfy this requirement may not also be used to satisfy the Departmental Humanities Requirement or the Communication; Mathematical, Scientific and Technological Literacy; Arts and Humanities; or Social Sciences General Education Requirements.

Notes:
1. For graduation, a candidate for the BA degree in Computer Science must have earned a grade of C or better in each CPSC course applied to the non-elective requirements of the degree.
2. A grade of C or better must be earned in all prerequisite courses (including CPSC and MATH courses) before enrolling in the next CPSC course.
3. General Education Cross-Cultural Awareness and Science and Technology in Society requirements must be satisfied.