

**BOARD OF HIGHER EDUCATION**

**REQUEST FOR COMMITTEE AND BOARD ACTION**

**COMMITTEE:** Academic Affairs

**NO:** AAC 18-28

**COMMITTEE DATE:** June 12, 2018

**BOARD DATE:** June 19, 2018

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**APPLICATION OF SALEM STATE UNIVERSITY TO AWARD THE BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY**

**MOVED:** The Board of Higher Education hereby approves the application of **Salem State University** to award the **Bachelor of Science in Information Technology**.

Upon graduating the first class for this program, the University shall submit to the Board a status report addressing its success in reaching program goals as stated in the application and in the areas of enrollment, curriculum, faculty resources, and program effectiveness.

Authority: Massachusetts General Laws Chapter 15A, Section 9(b)

Contact: Winifred M. Hagan, Ed.D.,  
Associate Commissioner for Academic Affairs and Student Success

## **BOARD OF HIGHER EDUCATION**

**June 2018**

### **Salem State University Bachelor of Science in Information Technology**

#### **INTENT AND MISSION**

Consistent with the Salem State University (SSU) mission, the proposed Bachelor of Science in Information Technology (BS/IT) program is expected to provide a high quality, student-centered education that prepares a diverse community of learners to contribute responsibly and creatively to a global society and serve as a resource to advance the region's cultural, social and economic development. SSU plans that the BS/IT program will support the four primary goals of the recently approved strategic plan including financial vitality; collaboration, inclusion and stewardship; academic excellence; and student success.

In service to these four goals SSU plans that the BS/IT will provide increasingly diverse students with financially rewarding technology careers, and focus on science and healthcare with a strong liberal arts context. It is expected that regional planning will produce graduates with the technical skills needed for the economic development of the region. SSU also plans for articulated programs with community college partners in the region. The proposed BS IT program has been intentionally designed with an ABET (Accreditation Board for Engineering and Technology, Inc.) accreditation-ready course structure that includes high-demand skills for positions in networks and security, database administration, IT system integration and management. The proposed program is designed to provide an innovative educational experience with modern lab-based practical learning.

A primary intent of the proposed BS/IT program is to include advanced skills within the degree program that will address the demand for trained knowledge workers in emerging IT areas.

It is intended that students pursuing the BS/IT will be required to integrate a minor from another department, contextualizing their study of information technology and broadening the institutional scope of the program. In this way, SSU students will be offered an interdisciplinary approach to learning industry-standard IT technical concepts and skills, taught within the IT program in the Computer Science Department. IT majors will be required to connect their developing knowledge and skills with another discipline through pursuit of a minor. Similarly, undergraduate students in other programs such as management or accounting and finance will be able to enroll in IT courses such as networking, database management, web development, and computer security. Criminal Justice students may find an IT cyber security course useful in broadening their knowledge base. As well, students in SSU's new healthcare studies major will be able to prepare for careers in health informatics.

The proposed program has obtained all necessary governance approvals on campus and was approved by the Salem State University Board of Trustees on April 11, 2018. The required letter of intent was circulated on February 22, 2018. No comments were received.

## NEED AND DEMAND

### *National and State Labor Market Outlook*

According to the research done by the National Student Clearinghouse® Research Center™ and as published in Business Wire, the field of technology expects to see an enrollment percentage increase of 15.9 at four-year institutions as shown in table below.

Top 5 undergraduate fields of study based on percentage increase at four-year institutions<sup>1</sup>:

<b>Fields of Study</b>	<b>Percentage Increase</b>
Science Technologies/Technicians	15.9%
Liberal Arts and Sciences, General Studies and Humanities	4.7%
Architecture and Related Services	4.1%
Engineering	4.0%
Natural Resources and Conservation	2.5%

SSU also reports that the IT-related workforce situation in Massachusetts reflects the nation-wide scenario and expects that training a more skilled workforce in Massachusetts will become urgent. The SSU proposal cited a Congressional Research Service report indicating that there were 6.2 million scientists and engineers in 2012 employed in the US, 56% of which fell in computer and technology occupations. For science and engineering positions, the employment increase rate was shown to be 1.5% from 2008 to 2012. The projected employment growth rate from 2012 to 2022 was reported to be an additional 1.3%. Approximately 1.3 million scientists and engineers are expected to exit occupations during this time, indicating that there will be a need for about 1.2 million computer scientists nationally. The report also documented that when compared to professionals in other occupational groups, scientists and engineers earned much higher mean wages and experienced significantly lower unemployment.

SSU noted that the demand for more computer scientists is also supported in a report by the Joint Economic Committee: *STEM Education: Preparing for the Jobs of the Future*.<sup>2</sup> The report highlighted the need for workers with computer skills in the US economy and made a projection that computer occupations would have the highest sustained growth rate among STEM occupations. Additional data points regarding job prospects for careers in the IT field suggest that job growth in IT will increase by 13% from 2016 to 2026, adding about 557,100 new jobs by 2024 (U.S. Bureau of Labor Statistics, January 30, 2018). Currently there are 10,809 full-time unfilled IT related positions in the Massachusetts/Boston area (Indeed Career Search, January 2018). Of the “Five Jobs that are Set to Grow in 2018,” three fall within the scope of the IT industry: machine trainer, AI engineers, and video game streamer (MIT Technology Review, January 8, 2018)

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<sup>1</sup> Business Wire, Undergraduate Enrollment, Published on Dec 19 2016, Retrieved on Feb 1 2017  
<http://www.businesswire.com/news/home/20161219005214/en/Undergraduate-Enrollment>

<sup>2</sup> Joint Economic Committee: STEM Education: Preparing for the Jobs of the Future  
[http://www.jec.senate.gov/public/\\_cache/files/6aaa7e1f-9586-47be-82e7-326f47658320/stem-education--preparing-for-the-jobs-of-the-future-.pdf](http://www.jec.senate.gov/public/_cache/files/6aaa7e1f-9586-47be-82e7-326f47658320/stem-education--preparing-for-the-jobs-of-the-future-.pdf)

Students will be taught in fully equipped IT labs consisting of latest hardware and software tools. This will ensure that they are prepared for current workforce needs.

### *Student Demand*

The IT programs at Bunker Hill, North Shore, Northern Essex, Roxbury, and Middlesex Community Colleges are planned to be feeders to the proposed program at SSU. In addition, when meeting with students on these campuses, SSU has found significant interest in an IT-specific program. Because IT programs are not mapped in the statewide transfer pathways initiatives, SSU finds opportunity for articulations with community college partners. SSU cites a 76% increase in completed applications and 92% increase in admitted students for computer science as indicators of rising student demand. SSU has also found demand for the proposed program through the CommUniverCity initiative. It is expected that students will be able to transition from neighboring school districts to Community Colleges and on to the University. It is expected that the clear pathway with supports beginning in secondary school and carrying forward through community college and baccalaureate completion will create the demand. SSU also notes that the current IT concentration includes 12 students who are expected to migrate to the proposed program once it has obtained approval.

## **OVERVIEW OF PROPOSED PROGRAM**

The proposed Bachelor of Science in Information Technology is envisioned as an undergraduate degree program that will prepare students for careers in the IT industry, as well as for IT-related jobs in a range of other high-demand workforce domains, including biotechnology, business, and healthcare administration. Every day there is an abundance of IT job postings that list an array of skill sets that currently do not exist in many academic programs, such as the demand for data scientists. There is also a shortage of skills in various specializations that are core of IT, for example, cyber security, network administration, and database management.<sup>3</sup>

At Salem State, the proposed BS IT program will be housed in the Computer Science department, which currently offers an ABET-accredited BS degree in computer science. Each of these programs will be supervised by its own undergraduate program director who will report to the department chairperson, who reports directly to the Dean of the College of Arts and Sciences.

### *Duplication*

Other public institutions offering a BS/IT program include the University of New Hampshire, University of Massachusetts Boston, and Framingham State University. Worcester State University offers a minor in information technology.

The University of New Hampshire program aims to provide graduates with the skills and knowledge to take on appropriate professional positions in IT upon graduation. Potential careers

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<sup>3</sup> Retrieved from: <http://www.networkworld.com/article/2893365/security0/shortage-of-security-pros-worsens.html>

include network administrator, database developer, system administrator, and webmaster.<sup>4</sup> The students graduated in 2014-2015 from B.S in IT program are 25.<sup>5</sup>

The UMass Boston program is designed for students who want to work in IT but who do not want to become programmers. This is a hands-on, project-based program.<sup>6</sup> The students graduated in 2014-2015 from B.S in IT program are 80.<sup>7</sup>

Framingham State University offers a B.S. in Business and Information Technology and a Minor in IT. This major is a collaboration with the Business and Computer Science departments and provides students with knowledge in both the business and information technology fields. The intent of this program is to prepare the Business and Information Technology program to bridge the gap between technology and business. Graduates are likely to initially qualify for jobs as systems analysts, Project Management Office administrators, technical trainers, quality assurance analysts and similar roles. As experienced workers, they are likely to move into Project Management, Delivery Assurance and IT Management roles<sup>8</sup>.

The Worcester State information technology minor is an interdisciplinary minor that gives students the opportunity to develop skills and capabilities for the effective use of information technology in their discipline.<sup>9</sup>

## **ACADEMIC AND RELATED MATTERS**

### *Admission*

SSU admission requirements are taken directly from the BHE's standards and require that first year entering students have a minimum GPA of 2.5 and have completed 4 courses in English and Mathematics, 3 courses in science, and 2 courses in a single foreign language and in the social sciences including US History. Transfer students will be required to have 12-23 college credits with a minimum GPA of 2.5; or up to 23 college credits with a minimum GPA of 2.0, and meeting minimum freshman applicant requirements; or 24 or more college credits with a minimum GPA of 2.0. SSU expects that the admission standards will help to qualify the prognosis for student success, and that the marketing of pathways or articulations to students and feeder institutions will be critical to increasing enrollments.

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<sup>4</sup> University of New Hampshire <https://cs.unh.edu/bs-information-technology>

<sup>5</sup> Students graduated from B.S in IT at University of New Hampshire  
<https://nces.ed.gov/collegenavigator/?q=University+of+New+Hampshire&s=all&l=93&ic=1&id=183044>

<sup>6</sup>University of Massachusetts Boston  
[http://www.umb.edu/academics/csm/computer\\_science/ug/information\\_technology/](http://www.umb.edu/academics/csm/computer_science/ug/information_technology/)

<sup>7</sup> Students graduated from B.S in IT at University of Massachusetts Boston  
<https://nces.ed.gov/collegenavigator/?q=University+of+Massachusetts+Boston&s=all&l=93&ic=1&id=166638>

<sup>8</sup> Framingham State University <https://www.framingham.edu/academics/colleges/science-technology-engineering-and-mathematics/computer-science/programs/majors/business-and-information-technology-major>

<sup>9</sup> Worcester State University <http://www.worcester.edu/Information-Technology-Program/>

### Program Enrollment Projection

	Number of Students			
	Year 1	Year 2	Year 3	Year 4
New - Full Time	15	20	22	24
Returning - Full Time		12	28	34
<b>Totals</b>	15	32	50	58

#### *Curriculum (Attachment A)*

In addition to the General education requirements of SSU, the proposed program requires students to complete core courses within the major, non-IT support courses, and a required minor from outside the IT program. The BS IT program was SSU developed the BS/IT based on guidelines and recommendations specified jointly by ABET and the Computing Accreditation Commission (CAC), an organization of content specialists selected to address a broad constituency with interests in the computing field. These guidelines and requirements were the result of five years of work by specialists in the varied aspects of the computing field in general and the IT field in particular, including practitioners, academic researchers, industry providers of IT technologies and services, consumers of IT technologies and services, and numerous professional organizations. Because the program content of the proposed BS IT is based on standards specified by ABET / CAC, we are confident that the program will impart to its students a high-quality education that addresses industry expectations. It will also allow the IT program to target ABET accreditation, thus attaining recognition by industry professionals and employers, and documenting to potential students that the program adheres to the highest professional standards.

#### **Resources**

##### *Budget (Attachment B)*

SSU assumptions underlying the expense projections include that the program will require the creation of a dedicated Information Technology Lab - an investment in facilities, space, and computing hardware including an audio visual podium. For the purpose of seeking ABET accreditation for this program, the hardware in the computing is expected to be refreshed on a 3 to 4-year cycle at a cost of \$50,000 in year four. The projected faculty costs are based on use of current full-time tenure track Computer Science faculty in years one and two with the addition of an adjunct faculty member in year three of the program. Should enrollments exceed current expectations, SSU expects that revenue generated through fees would be used to hire an additional tenure-track faculty member in year 3 or year 4. SSU assumptions underlying the income projections include student enrollment based on 15 students in year one of the program, a modest year over year increase, and a 20% attrition rate. All income was calculated based on the undergraduate in-state day rate.

The proposed program budget includes \$135,000 in start-up costs for a computer lab with a dedicated workbench with 24 student workstations and a lectern with one instructor station. This renovation is planned to include electrical wiring, asbestos remediation, and paint. The components of the startup costs for the Meier Hall lab include 25 Dell PCs, an audio-visual lectern, and facilities renovation.

#### *Faculty and Administration (Attachment C)*

Upon initial approval, the proposed BS IT program will be supported by two full-time tenure-track faculty, one administrative assistant, and an IT Lab administrator, all of whom are already employed by the University within the Computer Science Department. (The current IT faculty teach in the existing IT minor within computer science). If need arises, computer science program faculty may be deployed to help teach some courses in the IT program. The department also has plans to hire appropriately prepared adjunct faculty as needed to meet student demand

#### *Facilities, Library and Information Technologies*

The proposed BS/IT program has been intentionally designed with ABET-quality modern lab-based practical learning experiences and housed in the Computer Science department, which currently offers an ABET-accredited BS degree in computer science.

SSU has a new library with access to over 300,000 electronic books and 57,000 journals. The library has 1,000 study seats and 150 public access computer workstations. There is a librarian dedicated to assisting faculty and students with their research needs.

The university's Information Technology department maintains student computing labs throughout the campus and supports laptops for students and faculty as well as program specific software. Media Services, a division of Information Technology, supports smart classroom technology for projectors, screens, and boards.

#### *Affiliations and Partnerships*

SSU has joined with North Shore Community College (NSCC), the City of Lynn, Lynn Public Schools, North Shore Workforce Investment Board, and other non-profits in the Lynn area in the CommUniverCity<sup>10</sup> at Lynn project. As such, SSU and the project partners are focused on providing educational pathways from pre-K to career for Lynn residents, particularly low-income residents. This project started in 2014 and the very first Academic Pathway focused on IT, preparing students for high-wage, high-demand jobs in technology.

Credits earned in the BS/IT program are expected to be transferable to other institutions and vice versa based on emerging articulation agreements which will be finalized one program approval has been obtained. Given the structure of the proposed BS/IT informed by ABET accreditation standards and the curricular expectations, SSU anticipates no significant

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<sup>10</sup> North Shore Community College, CommUniverCity , Retrieved on Feb 1, 2017  
<http://www.northshore.edu/communiversity/>

challenges for students wishing to transfer credits to another institution. Ongoing efforts to more fully align curricula among state institutions through efforts such as MassTransfer further facilitate the transfer of courses and credits.

SSU plans that the process of organizing an advisory board will start as soon as the proposal obtains approval. IT program gets approved. Advice to SSU from associates within the IT industry (academic colleagues, IT trainers, practitioners in the field) has been an integral component of the development of the IT program proposal from its inception. It is expected that a formal External Advisory Committee will be developed and that the role of this committee will be to review the curriculum and give suggestions as to how the curriculum can be improved to address the current needs of the industry. The program will eventually seek ABET accreditation, which will also require that such a committee is already in place. This committee is expected to be comprised of selected industry, academia, and alumni members.



## PROGRAM EFFECTIVENESS

Goal	Measurable Objective	Strategy for Achievement	Timetable
Earn ABET Accreditation	Accreditation Approval	Schedule campus visit with ABET accreditation committee every 6 years (accreditation cycle)	Fall 2021 (Initiate process after first graduates)
Program reviewed by Industry advisory board committee	Meeting Minutes Review Suggestions	Identify and setup Industry advisory board committee	Spring 2018
Ensure continuing quality	Course Review Report	End of the semester review submitted by each faculty	End of each semester
Provide hands on experience to students	A newly renovated computer classroom  A dedicated hardware lab space	A proposal has already been submitted to the university governance. Designs for renovation are also already in place.  A proposal will be submitted to the university governance.	Began Fall 2017  Fall 2018

## EXTERNAL REVIEW AND INSTITUTIONAL RESPONSE

The proposed program was reviewed by John P. Girard, Ph.D., Peyton Anderson Endowed Chair and Professor of Information Technology at Middle Georgia State University and Israel Yost, M.S., Principal Lecturer in the Department of Computer Science at the University of new Hampshire in Durham NH.

The reviewers found that the program was designed to align with the Accreditation Board for Engineering and Technology (ABET) criteria, and based on this fact determined that the proposed program will serve the students and ensure that graduates will have a substantial, coherent, and in-depth study of information technology.. The team also found that the proposed program was developed as a tiered program that will ensure students engage in learning at the introductory through advanced levels. They noted that the proposal included detailed assessment protocols, including IT Curriculum Committee meetings, student major-level course assessment, industry Advisory Board meetings, regular review of major-level course offerings, and documentation of faculty professional development.

The team also made suggestions for adjustments to the curriculum and better alignments to other majors. SSU responded by changing some of the courses within the curriculum. They further underscored the significance of the business department as a close partner in the endeavor. SSU also noted that the students from other majors already take survey and programming courses in computer science program as concentration electives.

## **STAFF ANALYSIS AND RECOMMENDATION**

Staff thoroughly reviewed all documentation submitted by the **Salem State University** and external reviewers. Staff recommendation is for approval of the proposed **Bachelor of Science in Information Technology** program.

## ATTACHMENT A: CURRICULUM

<b>Required (Core) Courses in the Major (Total # courses required = 14)</b>		
<i>Course Number</i>	<i>Course Title</i>	<i>Credit Hours</i>
ITE 100	Fundamentals of Information Systems and Technology	3
ITE 105	Problem Solving with Algorithms	3
ITE 200	Computer Hardware and Software	3
ITE 210	Introduction to Programming	4
ITE 310	Computer Networks	4
ITE 315	Network Security	4
ITE 320	Information Management Systems	4
ITE 330	Web Systems	4
ITE 340	Human Computer Interaction	3
ITE 350	IT System Integration, Admin, and Management	4
ITE 410	Advanced Computer Networks	4
ITE 420	Database Administration	4
ITE 501	IT Capstone Project Specification	1
ITE 505	IT Capstone Project	3
	<b>Sub Total Required Credits</b>	<b>48</b>
<b>Required Support (Total # courses required = 4) (attach list of choices if needed)</b>		
MAT 147	Statistics	3
MAT 214A	Discrete Structures	4
PHL 226	Symbolic Logic I: Propositional Logic	3
ITC 117	Computers in the professions	3
	<b>Sub Total Required Support Credits</b>	<b>13</b>
<b>Required Minor (Total # courses required = 5-6) (attach list of choices if needed)</b>		
Students may choose any Minor from the list of Minors in the adjacent column.	<ul style="list-style-type: none"> <li>• IT in the Arts and Sciences Minor</li> <li>• Business Administration Minor</li> <li>• Management Minor</li> <li>• Entrepreneurship Minor</li> <li>• Accounting Minor</li> <li>• Marketing Minor</li> <li>• Music Technology Minor</li> <li>• Criminal Justice Minor</li> <li>• Professional Writing Minor</li> <li>• Graphics Design Minor</li> </ul>	
	<b>Sub Total Required Support Credits</b>	<b>15-18</b>
<b>Distribution of General Education Requirements</b>		<b># of Gen Ed Credits</b>
Attach List of General Education Offerings (Course Numbers, Titles, and Credits)		
Arts and Humanities, including Literature and Foreign Languages		15
Mathematics and the Natural and Physical Sciences		10-11
Social Sciences		9
<b>Sub Total General Education Credits</b>		<b>34-35</b>
<b>Curriculum Summary</b>		
<b>Total number of courses required for the degree</b>		<b>35-36</b>
<b>Total credit hours required for degree</b>		<b>120</b>
<b>Prerequisite, Concentration or Other Requirements: N/A</b>		

**ATTACHMENT B: BUDGET**

		<b>Annual Income</b>			
	<b>Revenue Sources</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>
	Grants	\$0	\$0	\$0	\$0
	Tuition	\$13,651	\$29,123	\$45,504	\$52,421
	Fees	\$147,546	\$330,509	\$542,280	\$655,942
	Departmental	\$22,362	\$48,358	\$76,640	\$89,824
	Reallocated Funds	\$0	\$0	\$0	\$0
	Other - Scholarship allowance	(\$18,356)	(\$40,799)	(\$66,442)	(\$79,819)
	<b>Totals</b>	\$165,203	\$367,191	\$597,982	\$718,368

<b>One Time/ Start Up Costs</b>		<b>Annual Expenses</b>			
	<b>Cost Categories</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>
	Full Time Faculty* <i>(Salary &amp; Fringe)</i>	\$0	\$0	\$0	\$0
	Part Time/Adjunct Faculty <i>(Salary &amp; Fringe)</i>	\$0	\$45,872	\$74,598	\$75,298
	Staff (Program Coordinator)	\$9,144	\$9,334	\$9,528	\$9,727
\$20,000	General Administrative Costs	\$15,000	\$10,000	\$0	\$0
\$135,000	Facilities/Space/Equipment	\$14,050	\$13,642	\$13,736	\$63,833
	Other (Specify)	\$0	\$0	\$0	\$0
\$155,000	<b>Totals</b>	\$38,194	\$69,513	\$97,862	\$149,716
(\$155,000)	<b>Projected Annual Net Revenue</b>	\$127,010	\$297,678	\$500,119	\$568,652

**Attachment C: Faculty Form**

Summary of Faculty Who Will Teach in Proposed Program							
Please list full-time faculty first, alphabetically by last name. Add additional rows as necessary. Note: Professors Sreeramareddy and Wadhwa have been hired explicitly to teach IT offerings. All other faculty listed below are Computer Science (CS) focused, but teach IT-related courses..							
Name of faculty member (Name, Degree and Field, Title)	Check if Tenured	Courses Taught Put (C) to indicate core course. Put (OL) next to any course currently taught online.	Number of sections	Division of College of Employment	Full- or Part- time in Program	Full- or part-time in other department or program (Please specify)	Sites where individual will teach program courses
Hatfield, Bo Ph.D in Computer Engineering Full Professor  Department Chairperson  [CS Focus]  *Professor Hatfield's primary area of expertise and area of teaching responsibility is computer science. She will teach in the IT program as needed.	<input checked="" type="checkbox"/>	<ul style="list-style-type: none"> <li>• Survey of Computer Science I (C)</li> <li>• Survey of Computer Science II (C)</li> <li>• Software Design and Programming I (C)</li> <li>• Software Design and Programming II (C)</li> <li>• Digital Circuit Design (C)</li> <li>• Computer Architecture and Organization (C)</li> <li>• Database Systems</li> <li>• Computer Networks and Data Communications</li> <li>• Distributed and Cloud Computing</li> </ul>	TBD*	Day	Full Time	No	<ul style="list-style-type: none"> <li>• SSU Campus</li> </ul>

		<ul style="list-style-type: none"> <li>• Topics in Computer Science: Mobile Application Development</li> </ul>					
<p>Kaur, Komalpreet Ph.D. in Electrical and Computer Engineering Assistant Professor</p> <p>[CS focus]</p>	<input type="checkbox"/>	<ul style="list-style-type: none"> <li>• Software Design &amp; Programming I (C)</li> <li>• Software Design &amp; Programming II(C)</li> <li>• Data Structures &amp; Algorithms (C)</li> <li>• Survey of Computer Science I (C)</li> <li>• Survey of Computer Science II (C)</li> <li>• Artificial Intelligence</li> <li>• Robotics and Computer Vision</li> <li>• Real-Time Computer Interfaces</li> </ul>	<p>2</p> <p>5</p> <p>4</p> <p>1</p> <p>1</p> <p>1</p> <p>1</p> <p>1</p>	Day	Full-time	No	<ul style="list-style-type: none"> <li>• SSU Campus</li> </ul>
<p>Kentros Sotirios Ph.D. in Computer Science and Engineering Assistant Professor</p> <p>[CS focus]</p>	<input type="checkbox"/>	<ul style="list-style-type: none"> <li>• Survey of Computer Science I</li> <li>• Survey of Computer Science II</li> <li>• Software Design and Programming I</li> <li>• Software Design and Programming II</li> <li>• Computer Security Basics</li> <li>• Computer Networks and Data</li> </ul>	<p>3</p> <p>2</p> <p>3</p> <p>2</p> <p>1</p> <p>2</p>	Day	Full-time	No	<ul style="list-style-type: none"> <li>• SSU Campus</li> </ul>

		Communications • Computer and Network Security Engineering	2				
Sreeramareddy, Lakshmidevi D.Sc in Information Technology Assistant Professor  [IT focus]	<input type="checkbox"/>	• Survey of Computer Science I (C) • Computers and Their Uses (C) • Computing in the Professions (C)	5 4 6	Day	Full-Time	No	• SSU Campus
Wadhwa, Manish Ph.D in Electrical and Computer Engineering Assistant Professor  [IT focus]	<input type="checkbox"/>	• Software Design and Programming I (C) • Survey of Computer Science I • Survey of Computer Science II (C) • Computers and Their Uses (C,OL)	4 6 2 7	Day	Full-Time	No	• SSU Campus
Yi, Beifang Ph.D. in Computer Science & Engineering Associate Professor  [CS focus]	<input checked="" type="checkbox"/>	• CSC101 (i.e., CSC200A): Computer Science Survey I (C) • CSC110 (i.e., CSC201J): Software Design and Programming I (Java) (C) • CSC115 (i.e., CSC202J): Software Design and Programming II (Java ) (C) • CSC105 (i.e., CSC215): Computer Science	4 1 7 2 6 1 5	Day Evening  Day Evening  Day Evening  Day	Full-time	No	• SSU campus

		<ul style="list-style-type: none"> <li>Survey II (C)</li> <li>• CSC246: Information Visualization</li> <li>• CSC278: Scripting Techniques</li> <li>• CSC295: Computer Architecture and Organization (C)</li> <li>• CSC381 (i.e., CSC280): Operating System Principles (C)</li> <li>• CSC315: Computer Networks and Data Communications</li> <li>• CSC340: Artificial Intelligence</li> <li>• CSC415: Analysis of Algorithms</li> <li>• CSC425: Computer Graphics and Games</li> <li>• MAT214A: Discrete Structures/Math (C)</li> <li>• ITC100: Computers and Their Uses (C)</li> </ul>	<p>3 1 1 1 9 1 1 3 3 2 3 3 2</p>	<p>Day Evening Day Day Day Evening Day Evening Evening Evening Day Evening Day</p>			
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