

COMPUTER ENGINEERING AND COMPUTER SCIENCE DEPARTMENT
J.B. Speed School of Engineering
University of Louisville

STUDENT HANDBOOK

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INTRODUCTION

The Department of Computer Engineering and Computer Science (CECS) is one of the few in the nation to offer an engineering degree in the field of Computer. Students pursuing this degree will obtain a thorough background in hardware, software, and analytical aspects of contemporary computer design and software engineering. Faculty and students research includes data base, data mining, multimedia, intelligent systems, distributed computing, computer networking, computer forensics, network security, software engineering, graphics, and simulation.

The Department offers Bachelor of Science (BS) and Master of Engineering (MENG) degrees with specialization in Computer Engineering and Computer Science. The MENG degree program is accredited by the Engineering Accreditation Commission (AEC) of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012 – telephone: (410) 347-7700. The BS degree program is accredited by the Computing Accreditation Commission (CAC) of ABET at the Baccalaureate Level. Both programs are offered principally on a daytime basis and include summer semesters. The first four years consist of an integrated sequence of academic course work and cooperative internship experience that fulfills the requirements for the BS degree. The MENG degree program requires a fifth year that combines course work and individualized thesis or design project. In addition, the Department offers a Master of Science (MS) degree in Computer Science; this program is available to persons who have an adequate background in mathematics and computer science but do not necessarily have an undergraduate degree in engineering. A Ph.D. degree program in Computer Science and Engineering is offered in collaboration with the Electrical and Computer Engineering (ECE) Department.

This Handbook brings together relevant information for CECS students from various campus publications and web sites regarding policies, procedures, and course requirements. It should be used as a reference guide by CECS students until graduation. Any requests for additional information should be directed to Ms. Gina L. Payne-Yunker (email: glpayn01@louisville.edu), J.B. Speed Building, Room 122; or telephone (502) 852-6304.

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I. ADMISSION TO THE CECS DEPARTMENT

A. Admission

Upon completion of the first two semesters in General Engineering, students may apply for admission to the Computer Engineering and Computer Science Department (CECS). Admission is subject to the approval of the department chair or designee. Students then pursue a combined program of academic studies and cooperative education in the CECS department.

Requirements for admission to the CECS Department are:

1. Complete two semesters in general engineering with courses designated for CECS majors.
2. Attain a minimum cumulative program grade-point average of 2.00 (C or better) in the following courses with a total of 34 credit hours:

EAC 101(4)	CECS 130 (3)	PHYS 298 (4)	ENGL 101 (3)
EAC 102 (4)	CECS 230 (3)	CHEM 201(3)	ENGL 102 (3)
GES 101 (2)	EG 150 (2)		HUM/SS (3)

3. Receive approval of the Department chair.

Application for admission to the CECS Department should be made early in the semester in which the student will have earned the equivalent of at least 34 semester hours of course work in the Division of General Engineering Studies. A student who is lacking one or more courses or did not satisfy the grade requirements may petition the Department for admission.

In consultation with the CECS Basic Studies Advisor, the student is responsible for developing a program of study combining the academic course work and the cooperative education program. A student should ordinarily plan to take no more than 18 semester hours of credit during the fall and spring semesters, and no more than 13 semester hours of credit during the summer term.

B. Course Work

The program of study is given on the following page for the student's reference. This program must be completed before admission to the Division of Basic Studies.

First Year

<u>Course Titles</u>	<u>Course Numbers & Credits (Semester Hrs)</u>					
	<u>Fall</u>		<u>Spring</u>		<u>Summer</u>	
Engineering Analysis I, II, III	EAC 101	(4)	EAC 102	(4)	EAC 201	(4)
Intro to Engineering	GES 101	(2)				
Intro to Prog Language	CECS 130	(3)				
College Writing I, II	ENGL 101	(3)	ENGL 102	(3)		
General Chemistry I	CHEM 201	(3)				
Chemistry I Lab	CHEM 207	(1)				
Engineering Graphics					EG 150	(2)
Physics I, II			PHYS 298	(4)	PHYS 299	(4)
Physics I Lab, II Lab			PHYS 295	(1)	PHYS 296	(1)
Fund of CSE			CECS 230	(3)		
Gen. Education Req. Electives ¹					XXX	(3)
First year Subtotals		(16)		(15)		(14)
Total Credits						(45)

Second Year

<u>Course Titles</u>	<u>Course Numbers & Credits (Semester Hrs)</u>					
	<u>Fall</u>		<u>Spring</u>		<u>Summer</u>	
Diff. Equations	EAC 205	(2)				
Info Structures	CECS 302	(3)				
Statics	CEE 205	(3)				
Coop Seminar, Coop I	CECS 288	(0)	CECS 289	(2)		
Active & Passive Networks	ECE 252	(3)				
Communications	COMM 111 /					
	112	(3)				
Gen. Education Req. Electives ¹	XXX	(3)			XXX	(3)
Logic Design					ECE 210	(3)
Logic Design Lab					ECE 211	(1)
JAVA					CECS 220	(1)
Digital Electronics					CECS 312	(2)
Discrete Mathematics					CECS 310	(3)
Second year Subtotals		(17)		(2)		(13)
Total Credits						(32)

Third Year

<u>Course Titles</u>	<u>Course Numbers & Credits (Semester Hrs)</u>		
	<u>Fall</u>	<u>Spring</u>	<u>Summer</u>
Coop II, III	CECS 389 (2)		CECS 489 (2)
Ethics/Social/Legal Aspects		CECS 311 (3)	
Linear Algebra for Engr.		EAC 330 (2)	
Engr. Probability & Statistics		IE 360 (3)	
Design of File Structures		CECS 335 (3)	
Object Oriented Design		CECS 440 (3)	
Gen. Education Req. Electives ¹		XXX (3)	

Third year Subtotals	(2)	(17)	(2)
Total Credits			(21)

Fourth Year

<u>Course Titles</u>	<u>Course Numbers & Credits (Semester Hrs)</u>		
	<u>Fall</u>	<u>Spring</u>	<u>Summer</u>
Computer Interfacing	CECS / ECE 412 (3)		
Design of Operating Systems	CECS 420 (3)		
Eng. Design Economics	IE 570 (3)		
Automata Theory	CECS 504 (3)		
CECS Electives ²	CECS 5XX (3)		CECS 5XX (3)
Software Engineering		CECS 550 (3)	
Numerical Analysis		CECS 508 /	
/Experimental Design		CECS 563 (3)	
Microcomputer Design		CECS 525 /	
		ECE 516 (4)	
Computer Network		CECS 516 (3)	
Gen. Education Req. Electives ¹			XXX (3)

Fourth year Subtotals	(15)	(13)	(6)
Total Credits			(34)

Minimum requirement for Bachelor of Science degree (four-year total): **132** Semester Hour
 Students must complete all required courses prior to being awarded the BS degree.

Notes:

- (1) Required General Education Electives do not include such subjects as accounting, industrial management, finance, personnel administration. Courses must be selected from the approved list of General Education course electives, given in Appendix E of this Handbook.
- (2) CECS Electives must be selected from CECS 5XX or CECS 6XX courses and do not include thesis or project hours.

II. REGISTRATION

A. Early Registration

Current and previously enrolled students may register for the upcoming semester or term during the current semester by participating in early registration. During this period, students generally have a better chance of getting the courses they want at the desired time periods. Currently enrolled students are required to consult with the appropriate CECS advisor prior to registering by touch-tone phone or online.

At the end of Early Registration, course requests are processed and students' schedules are confirmed. Student schedules and statements of account are available online through ULINK. Students are advised to consult the Early Registration calendar in the on-line Schedule of Courses to determine these dates.

Financial settlement is required by the due date to finalize early registration. If a student's courses are dropped for non-settlement, the student must register during Open Registration.

B. Open Registration

Students who do not participate in Early Registration may register in the days immediately preceding the start of the semester. Students should consult the appropriate unit section for procedures for students wishing to register in this fashion. Account settlement will be required within 72 hours.

C. Restricted Courses

Restricted CECS courses in the schedule require the permission of the department to enroll. Permission can be obtained from the CECS Academic Advisor.

III. COOPERATIVE EDUCATION PROGRAM

A. Length of Employment

In order to be eligible to receive the Bachelor of Science degree or the Master of Engineering degree, all candidates must have completed three semesters of cooperative education, totaling at least one calendar year's duration (50 weeks). Normally, the first cooperative education semester for CECS students will be during the spring of the second year of study, the second will be during the fall of the third academic year, and the third during the following summer semester. Deviation from this pattern requires advance written approval by the department chair.

B. Grades

Cooperative education courses are evaluated on a pass-fail basis, and students are required to submit a formal written report of their educational experiences following each cooperative education assignment. The report will be evaluated by both a CECS faculty member and the Director of Cooperative Education and Career Services. Failure to submit the cooperative education report by the prescribed date will result in an "F" (failure) being recorded for the course.

C. Required Cooperative Education Seminar (non-credit)

Each student scheduled for a particular cooperative education assignment must register for CECS 288 in the semester directly preceding his or her first cooperative assignment. The seminar covers the rules and regulations governing the cooperative education period and provides instruction in job interviewing techniques, resume preparation and in the preparation of the cooperative education report.

D. Registration Requirement for Cooperative Education

CECS students registering for their first cooperative education semester must have completed (or currently taking) *at least 50 program credit hours*, including the courses required for admission to CECS and CECS 302.

When registering for cooperative education, students are required to process a registration form with the signatures of both the CECS Department Advisor and the Cooperative Education Director. Failure to register for cooperative education credit prior to the beginning of each cooperative education semester will result in a letter from the Dean to the student and to the employer notifying them that the student is not enrolled at the University of Louisville and will not receive cooperative education credit for that semester -- late registration is not permitted.

E. Taking Classes While on Cooperative Education Assignment

Students are permitted to enroll for academic course work not exceeding four (4) semester hours during any cooperative education period. If the cooperative education assignment is away from the Louisville area, the student may take no more than four (4) semester hours of classes at another approved engineering school with ABET accredited programs.

Approval will be given only for academic work which does not interfere with the cooperative education work, and permission must be obtained prior to the beginning of the particular cooperative education period. Special request forms are available in the Office of Cooperative Education and Career Services.

IV. ACADEMIC REGULATIONS

A. Cumulative/Program Grade-Point Average

The University cumulative grade-point average (GPA) includes all courses attempted by the student at the University of Louisville and is not used for academic decisions in the JB Speed School of Engineering. The reported GPA on a transcript is the cumulative grade-point average.

B. Pass-Fail Option

A full-time student who has been admitted to an academic department may take one course each semester on a pass-fail basis to the limit of three courses or nine semester hours in total (not including credit obtained for cooperative education). Courses specified by number and/or title in the student's curriculum, any CECS required courses or electives, or any course cross-listed with a CECS course may not be taken on a pass-fail (or audit) basis. Consent of the department chair, the instructor, and the Associate Dean of Academic Affairs is required for all courses taken on the pass-fail option. Students on academic probation are not eligible to take courses on a pass-fail basis. Special request forms to take a course pass-fail are available in the Academic Affairs Office.

C. Repetition of Courses

Students may repeat to replace a maximum of four (4) courses with grades of F, D, or C. Both grades will appear on the transcript, but only the last grade attained will be calculated in the grade-point standing. For a complete statement of these requirements, students should consult the current on-line University Undergraduate Catalog.

Repeating a course under this regulation requires prior approval, and the student must complete the proper form in the school's Academic Affairs Office.

Permission will not be granted for a student to repeat courses which are sequential in nature, when the student has successfully completed a higher-level course in the sequence.

D. Withdrawal Procedure

Any student wishing to alter their approved schedule of courses in any way must do so in a timely manner. Failure to complete this official change or withdrawal process will result in a grade of "F" in each course in which the student is officially enrolled and not attending. Students may add courses to their schedules only within the first week of the semester. The Standard and Admission Committee may grant a student's request to withdraw from a course(s) because of sickness or conditions beyond the student's control by petitioning. The grade(s) in that case may be "W".

E. 600 Level Courses

Some students may wish to take 600 level courses toward their Master of Engineering degree during the last semester of their senior year, but prior to being officially admitted to the MENG program. To do so, the student must process permission from the Academic Services Office and obtain the approval of the department chair.

V. FUNDAMENTALS OF ENGINEERING EXAMINATION (FE)

The FE is the first part of the two-part exam required for Professional Engineering registration. Students are encouraged to take the FE in their senior year or as a graduate/professional.

Applications for the FE Examination may be obtained at <http://kyboels.ky.gov/fourappl.pdf>. The School offers a refresher course for the FE exam each spring. For more information contact Dr. Mike Harris at (502) 852-6228.

VI. THE DIVISION OF HIGHER STUDIES

A. Admission

Before completing the program of studies of the Division of Basic Studies, students desiring to pursue the Master of Engineering degree must formally apply for admission to the Division of Higher Studies of the Speed School. Requirements for admission or readmission to the Division of Higher Studies within the CECS Department are:

1. Completion of a BS program of studies equivalent to that obtained through the Divisions of General Engineering Studies and Basic Studies in Computer Engineering and Computer Science;
2. Recommendation by the faculty and chair for admission or readmission to the Division of Higher Studies;
3. A cumulative program grade-point average of 2.50 for all prior academic course work completed in the program. However, those students with cumulative grade- point averages from 2.25 to 2.50 may be admitted on a provisional basis by submitting a formal petition to the departmental faculty, and upon approval of the chair and the faculty.

Students must maintain a 2.50 cumulative program grade-point average for all academic course work attempted in the Higher Studies Division.

A candidate for the Master of Engineering degree who does not register for courses or thesis hours must maintain active registration by paying a fee each semester for MENG Residency (MENG 600) until the degree is awarded, i.e. the candidate must maintain continuous registration in the Higher Studies Division. Failure to pay the MENG Residency fee will be cause a cancellation of a student's candidacy. In order to restore it, the student must receive the approval of the department chair and the dean and must pay the fee for each of the terms during which the candidacy was void.

B. Course Work

The minimal requirements for the degree Master of Engineering with specialization in *Computer Engineering and Computer Science* are as follows:

Graduate/Professional Year

Course Titles	Course Numbers & Credits Hours	
	Thesis Option	Project Option
Simulation and Modeling of Discrete Systems	CECS 622 (3)	CECS 622 (3)
Database Design	CECS 535 (3) or CECS 630 (3)	CECS 535 (3) or CECS 630 (3)
MENG Thesis in CECS ¹	CECS 697 (6)	
MENG Project		CECS 696 (3)
Design of Compilers	CECS 530 (3)	CECS 530 (3)
Computer Design	ECE 510 (3)	ECE 510 (3)
Computer Design Lab	ECE 511 (1)	ECE 511 (1)
Design and Analysis of Algorithms	CECS 619 (3)	CECS 619 (3)
Approved CECS Elective ²	CECS 6XX (9)	CECS 6XX (12)
Graduate Year Totals	(31)	(31)

Minimum requirement for Master of Engineering degree (five-year total): 163 Semester Hours

Notes:

- (1) An MENG student is required to select an approved MENG Thesis or Project topic and a faculty advisor.
- (2) Required CECS program courses may be chosen to provide concentration at the Master of Engineering level in the areas of research focus in the department. The approved elective courses must be chosen with the prior written approval of the student's faculty advisor to meet the interests of a particular student and to strengthen the individual program in CECS. A sample of appropriate engineering design courses and engineering science courses are listed in Appendix C of this Handbook.

VII. THESIS AND PROJECT REQUIREMENTS

Upon entering the Division of Higher Studies, students need to decide on the thesis or project option. Thesis guidelines are posted on the [Speed School web-site](#). It is the responsibility of the student to become familiar with the Speed School policies and procedures for writing and submission of a thesis. These standards must be strictly adhered to. No format which conflicts with these requirements will be approved. Do not use previous theses as a guide.

An approved MENG thesis topic and members of the thesis committee should be selected during the first semester of enrollment in the Division of Higher Studies. Fourteen days before the oral exam the student shall notify the Dean's Office of the time and location of the exam and deliver a complete typewritten copy of the thesis to each member of the examination committee. After the exam, a complete revised copy must be submitted to the examination committee for their final approval and signatures.

Alternatively in the second semester a CECS faculty advisor and a project topic should be identified and approved. The students pursuing the project option are required to register in CECS 696 and present their projects in the announced presentation day and submit a final written report and a presentation approved by their faculty advisor to receive a project grade.

VIII. APPLICATION FOR DEGREE

Degree applications may be obtained in the Office of Academic Affairs. Students should apply for their degree (BS and MENG) at the beginning of the semester in which they intend to graduate. The deadline for filing the application is posted on the Registrar's website for each semester. It is the student's responsibility to obtain the approval of the department chair and return the form to the Associate Dean of Academic Affairs. If a student fails to graduate at the end of the semester for which he or she applied, it will be necessary to process the application again for the next semester in which graduation is intended.

IX. GRADUATING CLEARANCE FORM

It is the responsibility of each student applying for a degree to process a Form on Speed website at <http://speed.louisville.edu>.

X. PROFESSIONAL SOCIETIES

The [Association for Computing Machinery Student Chapter](#) is a professional society for students majoring in the Computer Engineering and Computer Science. The purpose of ACM is to advance the sciences and arts of information processing, and to promote the free interchange of information in this area. The various activities of this organization will be of assistance to students in enhancing their major in the CECS field. All students majoring in the CECS Department are encouraged to become active members of this organization. For information concerning ACM, students should consult the faculty advisor and/or the current student president of the organization. Information on ACM is available at: <http://www.speedacm.org/>.

An [IEEE student chapter](#) is also available and hosted in the ECE department and many activities including those of the local IEEE and IEEE Computer Society are of interest to CECS students. Information for joining the IEEE student chapter is available at <http://ieee.louisville.edu/>.

XI. MASTER OF SCIENCE PROGRAM IN COMPUTER SCIENCE

The department also offers a graduate program of study in the area of Computer Science leading to a Master of Science degree. This program is available for interested individuals who have an adequate background, but do not necessarily have a baccalaureate degree in engineering. This program is governed by the general regulations of the University of Louisville Graduate School and is accredited by the Southern Association of Colleges and Schools. Interested students should refer to the Graduate School Catalog or to the department office for further information about the Master of Science program. Application material must be submitted by June 15 for fall semester admission and by November 15 for the spring semester admission.

XII. Ph.D. IN COMPUTER SCIENCE AND ENGINEERING

The Computer Engineering and Computer Science Department offers a Ph.D. degree in Computer Science and Engineering through the Graduate School in collaboration with the Electrical and Computer Engineering Department. Students interested in the PhD program should consult the Graduate School or the Coordinator of the CSE PhD program.

XIII. STUDENT SERVICES

Office of Academic Affairs

Dr. Michael L. Day, Associate Dean for Academic Affairs, J.B. Building, Room 214, (502) 852-6100, Email: speed@louisville.edu, Provides most forms such as registration, drop/add, degree, repeat option, independent study, etc., receives petitions for late withdrawals, maintains records and program grade-point averages.

<http://speed.louisville.edu/>

Bursar's Office

Bursar, Houchens Building, (502) 852-6503. Handles payment of tuition and fees.

<http://louisville.edu/vpf/bursar/>

Cooperative Education and Career Services Office

Angela Cline, J.B. Speed 217, (502) 852-0394, Email address: alclin02@louisville.edu
Provides instruction in CECS 288 on resume writing, job search skills, and interviewing.
Placement Service for students seeking full-time jobs and cooperative education positions.

http://louisville.edu/speed/coop/coop_studinfo.html

Counseling Center

Student Health & Counseling Building, Vincent Brown, Assistant Director, Email address: coping@louisville.edu, (502) 852-6585. Personal and group counseling, support groups (i.e. Thesis support), workshops on study skills, time management, test taking, etc.

<http://campuslife.louisville.edu/counseling>

Computer Engineering and Computer Science Department

Dr. Adel S. Elmaghraby, Professor and Chair,
J.B. Speed, Room 123, (502) 852-6304.

Provides academic advising, resource and referral on policies and procedures, maintains student departmental files.

<http://louisville.edu/speed/cecs/>

Financial Aid

Houchen's Building, (502) 852-5511. Assistance in obtaining scholarships, student loans, college work study, etc.

<https://vhost.louisville.edu/student/services/fin-aid/devfinaid/index.php>

International Center

Brodschi Hall, (502) 852-6602. Helps foreign students with all facets of their transition into American life. Provides information concerning travel and study abroad.

<http://louisville.edu/provost/intcent/>

Intramural and Recreational Sports

Student Activity Center, (502) 852-6707. Sponsors a wide variety of games, events and recreational activities for U of L students.

<http://campuslife.louisville.edu/intramurals/>

University Career Center

Grawemeyer Hall, Rm 203, (502) 852-6701. Assistance with establishing career goals, educational objectives, and selecting a major.

<http://campuslife.louisville.edu/career/students>

Public Safety

2126 S. Floyd Street, Rm 100, Phone 502-852-7236. Parking Permits, payment of university parking fines, 24 hour campus patrol. All accidents, disturbances, crimes, etc. should be reported immediately to this department.

<http://louisville.edu/admin/dps/>

Disability Resource Center

Room 120 Robbins Hall, (502) 852-6938. Provides counseling and assistance for non-traditional students, i.e. handicapped, returning adult, evening students, and senior citizens.

<http://louisville.edu/student/dev/drc/>

Speed School Student Council

J.B. Speed, Rm 105, (502) 852-6301. Represents the Speed School student body on issues of importance to Speed students. Organizes events such as Engineers' Days, career fair sponsors warm weather sports, computers, phone, and publishes Speed Report weekly.

<http://speedcouncil.org/>

Student Activities Center

SAC and the Red Barn, (502) 852-6691. Provides cultural and social programs, and entertainment including movies, concerts, trips, and speakers.

<http://campuslife.louisville.edu/sac>

Student Government Association (SGA)

Student Center, (502) 852-6695. Student representation on the Board of Trustees is by the SGA President. Provides on-going programs for students and services such as discount cards, cinema passes, calendar of events, computers, book exchange, and student directory.

<http://louisville.edu/sga/>

Student Grievance Officer

Student Development Office, (502) 852-0291. Assistance to students filing academic or administrative grievances.

<http://louisville.edu/student/services/registrar/regist3o.htm>

<http://campuslife.louisville.edu/policies/studenthandbook/>

Student Health Services

2207 S. Brook Street, (502) 852-6479. Provides health care for university community at a competitive fee.

<http://www.med.louisville.edu/clinical/studenthealth/HSOHome.htm>

Student Legal Services

Student Legal Advisor, Student Center, (502) 852-6004. Legal aid available to students free of charge.

Tutoring

REACH, Strickler Hall, 852-6703. Tutoring available free of charge for U of L students taking U of L courses.

<http://www.reach.louisville.edu/tutoring/>

CECS Department Technical Services

Mr. Ronald A. Lile, Manager, Computer Services, (852) 852-0480. Provides technical support for departmental computing and laboratory facilities.

XIV. AWARDS

John H. Simester Award

The award is given to the Computer Engineering and Computer Science graduate who has attained the highest cumulative scholastic standing in the five year engineering program at the Speed School. The award consists of a cash award and a certificate.

Raymond I. Fields Award

The award is given to the Computer Engineering and Computer Science graduate who has contributed most to the department and school in leadership and service. The award consists of a cash award and a certificate.

CECS Master of Science Award

The award is given to the Computer Engineering and Computer Science graduate who have attained the highest cumulative scholastic standing in the departmental master of science program. The award consists of a cash award and a certificate.

Departmental Alumni Prizes

These prizes are awarded by the Speed School Alumni Association to outstanding Graduate/Professional Students nominated by each department.

ACM Distinguished Student Award

The award is given by the Student Chapter of the Association for Computing Machinery to honor a graduating Master of Engineering, or Master of Science student of the Computer Engineering and Computer Science Department. The award consists of a cash award and a certificate.

CECS Engineers' Days Awards

The Computer Engineering and Computer Science Department grants first, second, and third place departmental cash awards each year to CECS student projects that are exhibited at the annual Speed School Engineers' Days.

CSE Doctoral Award

The award is given to a Computer Science & Engineering doctoral student selected by the CECS department. Priority is given to those pursuing academic/research careers.

CECS Arthur M. Riehl Award

The award is given to a graduate/professional student with excellent academic performance and contributions to the department activities. The award is given in recognition of Professor Riehl who retired after 40 years of service as a faculty member (1959 - 1999) including 10 years as department chair (1977-1987).

CECS Outstanding Undergraduate Award

The award is given to a CECS undergraduate student who demonstrates excellence and potential for future achievements. The recipient is selected by the CECS faculty.

IEEE Outstanding CECS Student Award

The IEE Louisville Chapter honors two outstanding students upon the recommendation of CECS faculty.

APPENDICES

- A. Departmental Faculty Listing
- B. CECS Program Check-Off Sheet
- C. CECS Program Electives
- D. Course Requirements for Cooperative Education Assignments
- E. General Education Course Guidelines and Course Elective Lists
- F. Procedure to Handle Student Complaints
- G. Final Examination Policy

Appendix A

Departmental Faculty Listing

Dr. Antonio Badia

Databases and Query Languages

Dr. Dar-jen Chang

Database Design, Computer Graphics.

Dr. Ahmed H. Desoky (Associate Department Chair)

Computer Vision, Data Compression and Coding.

Dr. Adel S. Elmaghraby (Department Chair)

Multimedia, Biomedical Computing, Security, Simulation and Performance Evaluation.

Dr. Hichem Frigui

Pattern Recognition, Data Mining, Content Based Image Retrieval, Computer Vision & Image Analysis, Land Mine Detection, Soft Computing

Dr. James H. Graham (Vogt Endowed Chair)

Robotics, Artificial Intelligence.

Dr. Ibrahim N. Imam

Computer Graphics, Mathematical Modeling.

Dr. Mehmed Kantardzic (Graduate Programs Advisor)

Datamining, Neural Networking and Biomedical Applications.

Dr. Anup Kumar

System Software, Parallel and Distributed Systems.

Dr. Melvin J. Maron

Numerical Analysis, Engineering Education.

Dr. Olfa Nasraoui (E-Commerce Endowed Chair)

Data Mining & Pattern Recognition, Web Data Mining & Information Retrieval, Personalization, Computational Intelligence

Dr. Rammohan K. Ragade

Software Quality, Software Process, Object Technology, Rapid Prototyping and Genetic Algorithms.

Dr. Eric Rouchka

Bioinformatics and Computational Biology

Term Faculty

Tim Hardin

Particle Swarm Optimization, Computer Education

Adjunct Faculty

Mr. David King

Legal Aspects of Computing

Mr. Mike Losavio

Privacy, Ethics and Computer Law

Dr. Georgia Tourassi

Biomedical Engineering, Computer Aided Diagnostics, Proteomics

Visiting Faculty

Dr. Benjamin Arazi

Information Assurance, Security and Computer Forensics

Dr. Walaa Sheta

Virtual Reality, Visual Design, Graphics

Emeritus Faculty

Dr. Khaled A. Kamel

Networking, Automation.

Dr. Donald Linton

Stastical Modeling and Fractals

Dr. Arthur M. Riehl

Mathematical Modeling, Modeling of Computer Networks .

Appendix B
CECS Program Check-Off Sheet

ID:			Name:			SS Number:			Date of Enrollment:			Transfer From:		
Course	Semester	Grade	Course	Semester	Grade	Course	Semester	Grade	Course	Semester	Grade	Course	Semester	Grade
EAC 101			EAC 102			EAC 201								
CECS 130			CECS 230			PHYS 299								
CHEM201			PHYS 298			PHYS 296								
CHEM207			PHYS 295			EG 150								
ENGL 101			ENGL102			Gen Ed								
GES 101														
EAC 205			CECS 289			ECE 210								
CECS 302						ECE 211								
CECS 288						CECS 220								
CEE 205						CECS 310								
ECE 252						CECS 312								
COMM 111 or 112						Gen Ed								
Gen Ed														
CECS 389			CECS 311			CECS 489								
			EAC 330											
			CECS 335											
			IE 360											
			CECS440											
			Gen Ed											
ECE 412			CECS508/ IE563			CECS5xx								
CECS 420			CECS525/ ECE 516			Gen Ed								
CECS 504			CECS 550			ECE 510								
IE 570			CECS 516			ECE 511								
CECS5xx						CECS 6xx								
CECS 530			CECS 619											
CECS535 or CECS 630			CECS 622											
CECS697/ CECS 6xx			CECS697/ CECS 696											
CECS 6xx			CECS 6xx											

Appendix C

CECS PROGRAM ELECTIVES

Students majoring in the Computer Engineering and Computer Science (CECS) program must choose their electives in the following manner, in order to meet the CSAC/CSAB and ABET accreditation category requirements.

- I. CECS 5XX Electives during the fourth year, spring semester (second Basic Studies year), must be selected from the following courses:

- CECS 522 (3) Evaluation of Computer Systems
- CECS 542 (3) Computer Control and Real Time Programming
- CECS 545 (3) Artificial Intelligence
- CECS 546 (3) Knowledge Engineering and Expert Systems

- II. CECS 6XX Electives during the fifth year, fall and spring semesters (Graduate Professional year) may be selected as two (2) CECS courses, such as:

- CECS 608 (3) Advanced Operating Systems
- CECS 609 (3) Hypertext and Multi-Media
- CECS 611 (3) Computer Architecture
- CECS 616 (3) Computer Networks Architectures
- CECS 627 (3) Image Processing and Pattern Recognition
- CECS 628 (3) Computer Graphics
- CECS 629 (3) Distributed System Design

- III. CECS Technical Elective 5XX or higher during the fifth year, summer semester (Graduate Professional year), may be selected as any JB Speed School of Engineering course and may be a CECS course, such as;

- CECS 563 (3) Experimental Design in Engineering
- CECS 615 (3) Linear and Nonlinear Programming
- CECS 624 (3) Advanced Simulation
- CECS 645 (3) Advanced Artificial Intelligence
- CECS 650 (3) Advanced Software Engineering

Appendix D

Course Requirements for Cooperative Education Assignments COMPUTER ENGINEERING AND COMPUTER SCIENCE

Departmental Admission

Requirements for admission to the CECS Department include a 2.00 cumulative GPA and credit for the following courses, with a grade of C or better in each.

EAC 101(4)	CECS 130 (3)	PHYS 298 (4)	ENGL 101 (3)
EAC 102 (4)	CECS 230 (3)	CHEM 201(3)	ENGL 102 (3)
GES 101 (2)	EG 150 (2)		HUM/SS (3)

Eligibility for Cooperative Education Assignments

A minimum cumulative GPA of 2.00 and a minimum of 34 credit hours are required for the first cooperative education assignment. CECS 288, CECS Cooperative Seminar, is a non-credit prerequisite for a cooperative education assignment. Students enrolling in this Seminar must have applied for admission to the Computer Engineering and Computer Science Department and have the completed courses listed above.

Transfer students must have completed at least one semester at Speed School before enrolling in CECS 288, CECS Cooperative Seminar.

Appendix E

General Education Course Guidelines and Course Elective Lists

1. The overall objective of the General Education course requirements is to provide a broad, liberal education. To meet this objective in a non-trivial way, the student is expected to select areas of special interest in which some courses are taken at an advanced level, as described in the list below. It should be emphasized that skills-oriented courses (such as accounting, finance, personnel administration, industrial management) do not normally fulfill this objective, hence are not acceptable as General Education Electives.
2. Credits: The Bachelor of Science Degree requires a minimum of 15 semester hours of General Education courses.

Appendix F

Procedure to Handle Student Complaints

If a student should complain about courses, grades, deficiencies, or decisions apparently made by faculty members, advisors, department chairs, directors, etc., please use the following procedure:

1. The student should first discuss the matter with the person involved and attempt to resolve the complaint through informal discussion.
2. If there is no resolution, the student should discuss the matter with that person's supervisor or the person to whom such person reports in the department or office, who should attempt to mediate a resolution.
3. If there is no resolution as the result of these discussions, the student should write to the appropriate department chair or director specifying the nature of the concern, with a copy of the letter to the Associate Dean of Academic Affairs.
4. Within a reasonable period of time, depending on the time urgency, the Associate Dean of Academic Affairs will contact the department chair or director, orally or in writing, if a response has not been made.
5. Only in exceptional cases and as a last resort should the student be advised to write directly to the Dean.
6. If the student is unable to obtain a resolution through these procedures, he or she may request the Student Grievance Officer (SGO) to attempt informal mediation of the problem.

Appendix G

JB SPEED SCHOOL OF ENGINEERING FINAL EXAMINATION POLICY

1. The final exam is the last examination in a course administered during the appropriate period in the Final Exam Schedule in ULink. Types of final exams are in-class comprehensive, take-home comprehensive, in-class limited-scope, take-home limited-scope, and projects that serve as final exams.
2. A final exam is mandatory for all undergraduate (below 500-level) lecture courses and for all undergraduate (below 500 level) combination lecture/laboratory courses where a single grade is assigned. A final exam is optional for undergraduate (below 500 level) laboratory, design, seminar, project-oriented, and team-taught courses, with the instructor(s) responsible for deciding whether or not to administer a final exam.
3. Final exams will be administered only during the appropriate period listed on the Final Exam Schedule. Exceptions are take-home final exams, which will be due during the appropriate period for the course listed on the Final Exam Schedule.
4. Students must be notified of the type of final exam and its percentage of the course grade. This information should be included in the course syllabus, which is to be made available at the first or second class meeting.
5. Final exams for different courses (other than multiple sections of the same course) shall not be administered concurrently in the same classroom or auditorium.
6. No tests or quizzes are to be given during the last regularly-scheduled class meeting of the semester or term. New projects shall not be assigned during the last seven calendar days immediately prior to the beginning of the Final Exam Schedule, unless the project is a final exam.