Department of Computer Science

ERIK JONSSON SCHOOL OF ENGINEERING AND COMPUTER SCIENCE

Friday, March 29th, 2024

THE ORIENTATION BEGINS AT 8:30AM DALLAS, TX time

(USA Central Daylights Saving time)
Agenda for Today

- Introduction – Dr. Jorge Cobb (Associate Head Graduate Education CS Dept)
- Welcome Note – Introduction by Dr. Ovidiu Daescu –Department Head
- CS Department Overview – Dr. Jorge Cobb
- Graduate Advisors Computer Science Program – Dr. Jorge Cobb
- MS CS/SE Degree Planning
- Areas of Study (Track)
  - Traditional Computer Science
  - Networks and Telecommunications
  - Intelligent Systems
  - Cyber Security
  - Systems
  - Data Science
  - Interactive Computing
- MS in Software Engineering Program
- GCS
- Q&A !!!
Dr. Ovidiu Daescu
Department Head
Computer Science
• UT Dallas
  – Founded in 1969 (celebrated 50th Anniversary)
  – 31,000+ students: CS the largest department with ~ 4,600 students.
  – https://www.utdallas.edu/about-us/

• CS @ UT Dallas
  – 1970s: Program founded as part of math sciences
  – 1986: Erik Jonsson School founded with CS + EE
  – Upper division BS CS started late 80s; Lower division in early 90s
  – Rapid growth in MS population in last decades
  – Significant growth in faculty and PhD population in the 2000s
  – Brand: producer of graduates with deep tech knowledge
Computer Science at UTD

• One of the largest departments in the country (3rd largest) and, also one of the best
• Fall 2020 student population ~4,600 students (3,600 BS, 800 MS, 160 PhD)
• 51 T/T faculty, 40+ Faculty of Instruction, 20+ part-time lecturers
• BS, MS, PhD degrees offered in CS, SE
• ~300 course-sections offered each semester (wide variety)
• ~1000 students graduate each year (more than 1% of US output of CS graduates)
• World renowned CS faculty: publish in top conferences & journals
• ~$41 Million new research funding in the last three years
• 21st in LinkedIn ranking; #44 in USNWR global rank; #5 in UG AI (Best Value Colleges)
• 2019 csrankings.org: #5 SE, #6 in NLP, #7 AI
#21 Nationally in LinkedIn Ranking

Rice University
Houston, Texas Area
35,300 students & alumni on LinkedIn

University of Pennsylvania
Greater Philadelphia Area
125,200 students & alumni on LinkedIn

University of Arizona
Tucson, Arizona Area
151,400 students & alumni on LinkedIn

Harvey Mudd College
Greater Los Angeles Area
5,800 students & alumni on LinkedIn

The University of Texas at Dallas
Dallas/Fort Worth Area
61,400 students & alumni on LinkedIn
Excellence in Research

• Wide variety of research areas covered:
  - Cyber Security
  - Computer Systems
  - Software Engineering
  - Intelligent Systems
  - Computer Science Theory
  - Computer Networking
  - Data Science

• Strategic areas of focus:
  - Machine Learning/AI, Data Sci., Cyber Sec., SW Eng, IoT & Software Defined Network (SDN)

• Focus on Interdisciplinary/Multidisciplinary research
  - Computer Systems: Medicine, Rehabilitation, Image Proc., Art & Tech.
  - Cyber Security: Mgmt and Math Sci (risk management), political sci.
  - Intelligent Systems: Medicine, Speech processing
CS Accomplishments

• 16+ CS faculty members hold the prestigious NSF CAREER award
• Numerous best paper awards & academic honors (many test-of-time awards as well):
  – Dr. Bhavani Thuraisingham, Fellow of the ACM and Fellow of NAI
  – Dr. Zygmunt Haas, Fellow of two European Societies
  – Dr. Latifur Khan, Fellow of the IEEE
  – Dr. Murat Kantarcioglu, Fellow AAAS and IEEE
• CS faculty are excellent teachers: they have won many awards
• Diverse student body:
  – #11 nationally in number of women students
  – #11 nationally in number of Hispanic students
  – #14 nationally in number of African American students
CS Department: Centers & Institutes

- Cyber Security Education & Research Institute (CSERI)
  (Director: Dr. Kevin Hamlen)
- Human Language Technology Institute (HLTRI)
  (Director: Dr. Sanda Harabagiu)
- Inst. for Interactive & Spatial Computing (UT DIISC)
  (Director: Dr. Balakrishnan Prabhakaran)
- Institute for Data Analytics (IDA)
  (Director: Mr. Bao Tran)
- Embedded Software Center
  (Director: Dr. Farokh Bastani)
- Center for Software Testing
  (Director: Dr. Eric Wong)
- iPerform: Center for Assistive Technology to Enhance Human Performance
  (Director: Dr. Ovidiu Daescu)
- Center for Machine Learning Research
  (Director: Dr. Sriraam Natarajan)
- Applied AI and Machine Learning Center
  (Director: Dr. Doug DeGroot)
- Center for CS Education and Outreach
  (Director: Dr. Jey Veerasamy)
Opportunities for CS/SE Graduates

Annual jobs available vs. degrees granted

- Computer Science
- Engineering
- Life Sciences (incl. agricultural)
- Social Sciences (incl. psychology)
- Physical Sciences (incl. environmental)
- Mathematical Sciences

Annual jobs available
Annual Bachelors degrees
Annual Masters degrees
Annual Doctoral degrees

BLS job projection data: http://www.bls.gov/emp/ind-occ-matrix/occupation.xlsx
S&E Indicators degree data: http://www.nsf.gov/statistics/2016/nsb20161/uploads/1/12/at02-01.xlsx
Opportunities for CS/SE Graduates

• From a manufacturing economy to an information economy
• More things become automated, more and more software engineers needed
• With the Web and Mobile Apps becoming more pervasive, more people needed to develop them
• AI, Data Science, Machine Learning, Blockchain, IoT: new technologies gaining popularity
• This automation and pervasiveness of computing will continue to increase:

THE FUTURE FOR CS/SE IS BRIGHT

Great salaries: BS: $70K-$120K, MS: $80K-$150K, PhD: $90K-$200+K
Schedule an Appointment
Select an appointment type and select an available time slot to meet your advisor. Appointments are available up to a week in advance.

Send a Message in iComet
The ISSO offers advising services online through iComet. You can send a message to an advisor and receive a response through your iComet Portal.

Contact the ISSO
At ISSOProspective@utdallas.edu for advising services

Call ISSO
For general information, call the ISSO at 972-883-4189 between 9 a.m. and 3 p.m. The ISSO staff answering our phone lines are not immigration advisors.
GRADUATE DEGREE PLANNING SEMINAR
Fall/Summer 2024

Department of Computer Science
Erik Jonsson School of Engineering and Computer Science

The University of Texas at Dallas
Orientation/Degree Planning Seminar Overview

• Graduate Advisors Computer Science Program
• MS in CS, areas of study (Tracks) for
  - Traditional Computer Science
  - Networks and Telecommunications
  - Intelligent Systems
  - Cyber Security
  - Systems
  - Data Science
  - Interactive Computing
• MS in SE
• Annual Graduate Degree Planning Form submission
• Registration
Graduate Advisors

Prof. Jorge Cobb
Prof. Les Arnold
Prof. Pushpa Kumar
Prof. Laurie Thompson
• Prof. Jorge Cobb  ECS 4.208  CS/SE PhD, including PhD with MS
  cobb@utdallas.edu  
  CS/SE MS with Thesis
  MS in CyberSec track
  MS in SE program

• Prof. Pushpa Kumar  ECS 4.407  CSMS A - F
  pkumar@utdallas.edu

• Prof. Laurie Thompson  ECS 3.701  CSMS G - Q
  laurie.thompson@utdallas.edu

• Prof. Les Arnold  ECS 4.232  CSMS R - Z
  gordon.arnold@utdallas.edu
If you have already been admitted and need advice, please contact the advisor assigned to you.

Please make sure to check the below link for latest advisor assignment, including office hours. These may change over time.

https://cs.utdallas.edu/education/graduate/advising/

In order to use your time most efficiently, appointments are strongly recommended. Please email and request an appointment.

DO NOT TELEPHONE US!

1. Regulations prohibit useful discussion as we cannot ensure your identity when contacted by telephone.
2. Your phone call is likely to interrupt instruction or meetings with students or colleagues.
<table>
<thead>
<tr>
<th>Name</th>
<th>Office</th>
<th>Phone</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ms. Sydney Samuel</td>
<td>ECSS 3.903</td>
<td>972-883-4216</td>
<td><a href="mailto:sydney.samuel@utdallas.edu">sydney.samuel@utdallas.edu</a></td>
</tr>
<tr>
<td>Mr. Doug Hyde</td>
<td>ECSS 3.902</td>
<td>972-883-6612</td>
<td><a href="mailto:dhyde@utdallas.edu">dhyde@utdallas.edu</a></td>
</tr>
<tr>
<td>Mr. Eric Moden</td>
<td>ECSS 3.908B</td>
<td>972-883-4705</td>
<td><a href="mailto:eric.moden@utdallas.edu">eric.moden@utdallas.edu</a></td>
</tr>
<tr>
<td>Ms. Kirsten Fowler</td>
<td>ECSS 3.904</td>
<td>972-883-4194</td>
<td><a href="mailto:kirsten.fowler@utdallas.edu">kirsten.fowler@utdallas.edu</a></td>
</tr>
<tr>
<td>Ms. Kiara Hackett</td>
<td>ECSS 3.908</td>
<td>972-883-4206</td>
<td><a href="mailto:kxh230013@utdallas.edu">kxh230013@utdallas.edu</a></td>
</tr>
<tr>
<td>Ms. Emily Lenart-Donaldson</td>
<td>ECSS 3.905</td>
<td>972-883-4278</td>
<td><a href="mailto:eldonaldson@utdallas.edu">eldonaldson@utdallas.edu</a></td>
</tr>
</tbody>
</table>

The staff members are NOT Graduate ADVISORS. For any questions on classes, choosing a degree plan., etc, contact your Graduate Advisor.
Master of Science in Computer Science (33 credit hours)
- Traditional Computer Science
- Networking and Telecommunications
- Intelligent systems
- Cyber Security
- Systems track
- Data Science
- Interactive Computing

Master of Science in Software Engineering (33 credit hours)

Doctor of Philosophy (75 credit hours beyond B.S. degree) in
- Computer Science
- Software Engineering

Offered jointly by CS and ECE Departments
- Computer Engineering & Telecommunications Engineering
  (advising done by ECE Department)
- The graduate catalog is your official guide to degree plan requirements, become familiar with it!
  - https://catalog.utdallas.edu
  - https://catalog.utdallas.edu/2023/graduate/programs/ecs/computer-science

- This orientation is a summary, the **official rule** is the catalog
Department of Computer Science MS Requirements

- Five Core Courses from one of the tracks.
  - We will go over the list of core courses for each track in a moment.

- A minimum of 18 hours of approved electives.

- All requirements including transfer credit must be completed in a six-year window.

GPA requirements:

- **Core courses cumulative GPA ≥ 3.19**
- **Elective courses cumulative GPA ≥ 3.00**
- **Overall (including non CS/SE courses) graduate cumulative GPA ≥ 3.00**
Electives

• **Minimum of 18 semester credit hours**
  – At least 12 semester credit hours of 6000/7000 level elective CS courses, that could include 6 semester credit hours of thesis with approval of a graduate advisor.
    • Stay away from service courses – “for practitioners” in the title (.e.g. CS 6303, 6305)

• In addition, at least 6 semester credit hours from among:
  – **ECSC 5177** (maximum three semester credit hours)
  – CS 6000/7000 level elective courses
  – only one of **CS 5333**, **CS 5343** or **CS 5348**; (only if you took the course at UTD)

• A minimum grade point average of 3.0 is required for elective courses.
• Approved electives must be taken to make a minimum of 33 semester credit hours.
Master of Science Degree Plan

- If core GPA is above 3.00 but below 3.19, a seventh elective is required in the degree plan.
- If core or elective GPA is below 3.00, one or more courses must be repeated.
- Any course can be repeated only once and a maximum of three courses can be repeated in a degree plan.
- If a student repeats a course, the new grade will replace the earlier grade; both will appear in the transcript.
- Please check the graduate catalog for all other policies and procedures.

http://catalog.utdallas.edu/2023/graduate/home
Matriculating Fast Track Students

- Former Fast Track Students:
  - Courses Taken as Option A (Undergrad only) cannot be applied to your Masters program.

- Courses Taken as Option B (Fast Track) or C (Grad only)
  - Are ALL treated as Transfer Credits*
  - All course grades in Option B or C WILL affect your GPA

- Fast Track Admits, like all other students, have assigned Advisors and DPEs by last name alpha, Track, and/or Thesis option.
Admission Letter Sample

Dear,

Congratulations on your admission to the University of Texas at Dallas! The UT Dallas Committee on Graduate Studies congratulates you on your admission to the graduate program in Computer Science for the Fall 2008 semester. We share your excitement as you begin this new stage in your education.

At UT Dallas, we promise you a welcoming environment, intellectual challenges, great faculty in your field of study, and a diverse and stimulating University family.

Please note that all required supporting documents must be received before you will be able to register for classes. You must contact the program to which you have been admitted, as each program has additional conditions that must be met before you can register. For contact information, please visit http://utdallas.edu/enroll/graduate.

We want to ensure that as a newly admitted student you are aware of the next steps you should complete to prepare for your enrollment at UT Dallas. For help with this process and to confirm your intention to enroll visit http://www.utdallas.edu/enroll/graduate. Should you need to defer your admission for any reason please contact the Associate Dean for the program to which you were admitted.

Your foreign tuition status has been determined based on the information that you provided on your admission application. If you have any questions regarding your residency status, please contact the program to which you have been admitted for more information.

The graduate experience at UT Dallas is unique and exceptional. Our faculty and staff look forward to welcoming you to campus.

Sincerely,

Dean of the Erik Jonsson School of Engineering and Computer Science

To contact the School of Engineering and Computer Science, please call 972-883-2074. You may also find important information on our website at http://www.ecs.utdallas.edu.

cc: ECE CS P
Admission Requirements

- Your official admissions letter may state any required leveling courses recommended by the admissions committee.

- In case you have not seen your leveling courses assigned to you or missed it in your emails, contact a staff member.

- You are responsible for any leveling course required for your Degree Plan (track) and also for any course you choose.
Admission Requirements

- Students from Non CS/Related backgrounds MUST complete or be recognized upon admission the following MINIMUM leveling courses:
  - CS 5303 (Basic Computer Programming)
  - CS 5330 (CS II: Computer Architecture)
  - CS 5333 (Discrete Structures),
  - CS 5343 (Data Structures & Algorithm Analysis) and
  - CS 5348 (Operating Systems).

- Other leveling courses are necessary according to your track.
- You must COMPLETE your assigned 5000 level courses applicable to your degree plan in the first year of study at UTD.
- Supported students (RA/TA) must enroll in 9 graduate hours
If you are choosing CyberSecurity or SE degree plan, you must complete the required core and leveling courses in the first three semesters. Otherwise, you may not graduate on time.

These two degree plans require some careful planning and selection of courses each semester.

A general recommendation for all the students is to complete the core courses in your track in the first three semesters.

Do not leave any core course to be completed in the graduating semester, especially in a summer semester.
Grading System

• Letter grades A, A-, B+, B, B-, C+, C and F are used in grading graduate courses.

• GPA representation for the grades are as follows;

<table>
<thead>
<tr>
<th>Grade</th>
<th>GPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4.00</td>
</tr>
<tr>
<td>A-</td>
<td>3.67</td>
</tr>
<tr>
<td>B+</td>
<td>3.33</td>
</tr>
<tr>
<td>B</td>
<td>3.00</td>
</tr>
<tr>
<td>B-</td>
<td>2.67*</td>
</tr>
<tr>
<td>C+</td>
<td>2.33</td>
</tr>
<tr>
<td>C</td>
<td>2.00</td>
</tr>
<tr>
<td>F</td>
<td>0.00</td>
</tr>
</tbody>
</table>

* Please note B- is less than 3.00
All Important deadlines and dates are kept current in the Academic Calendar online.

- It is important that you review and know these dates (each semester):
  - Enrollment
  - Payment
  - Apply for graduation
  - PhD/MS-Thesis Final Defense

- The dates update constantly.
- Confirm the date ONLINE not on paper.
Enrolling, Dropping or Swapping

- The last day in Fall 24 to add/swap courses is Monday August 26 (with a late fee!)

- **DO NOT** drop classes online on the last day. If classes fill up, you may be under-enrolled by the last day to add/swap! Use SWAP instead of drop, or send us an add/drop form.

- When in doubt meet with a CS Grad Advisor.
Official Academic Calendar Fall 2024

Note: All offices are closed on Saturdays and Sundays. All transactions must occur online.
All email correspondence will be sent to UTD email address.

Classes Begin
Full-Term session: Monday, August 19
1st 8-week session: Monday, August 19
2nd 8-week session: Monday, October 14

Web Registration
Enrollment appointments available online... Monday, March 25
All students should check their enrollment appointment details in Orion for the date and time they can begin registering.
Schools Planner Available... Monday, March 26
Online add/drop ends... Monday, August 29

Last Day for Re-admission/Re-entry... Friday, August 9

Last Enrollment from Waitlist... Friday, August 16

Last Day for Regular Registration
Full-Term session: Thursday, August 15
1st 8-week session: Thursday, August 15
2nd 8-week session: Thursday, October 10

Late Registration and Last Day to Add/swap
If you register or add during late registration, payment is due the same day you register. You will be assessed a maximum of $100 late registration fee. See Bursar's Office information.
Full-Term session... Friday, Aug. 18 - Monday, Aug. 21
1st 8-week session... Friday, Aug. 18 - Monday, Aug. 21
2nd 8-week session... Friday, Oct. 11 - Monday, Oct. 14

Census Day (State Reporting Date) Last Day to Drop
Full-Term session: Wednesday, September 4
1st 8-week session: Monday, August 26
2nd 8-week session: Monday, October 21

Drop/Withdrawal Deadlines
Please check Comet calendar for signature procedures.

Full-Term Session
Last day to drop a class without a "W"... Wed., Sept. 4
Undergraduate Courses
Approval required... Thurs., Sept. 5 - Tues., Nov. 6
Graduate Courses
Withdrawal Ends... Tuesday, November 5

1st 8-Week Session
Last day to drop a class without a "W"... Mon., Aug. 26
Undergraduate Courses
Approval required... Tues., Aug. 27 - Mon., Sept. 23
Graduate Courses
Withdrawal Ends... Monday, September 23

2nd 8-Week Session
Last day to drop a class without a "W"... Tues., Aug. 22 - Thurs., Aug. 24
Undergraduate Courses
Approval required... Tues., Aug. 22 - Thurs., Aug. 24

Last Day of Classes (Not including final exams)
Full-Term session: Thursday, December 5
1st 8-week session: Thursday, December 5
2nd 8-week session: Thursday, December 5

Reading Days (Study days prior to final exams)
Full-term & 2nd 8-week sessions only... Friday, December 6

Final Exams
Full-term session... Saturday, Dec. 7 - Friday, Dec. 13
1st 8-week session... Monday, Oct. 7 - Saturday, Oct. 12
2nd 8-week session... Saturday, Dec. 7 - Friday, Dec. 13

Mid-Term Grades Due and Viewable Online
All midterm grades must be submitted online.
Midterm (undergraduate courses only)... Saturday, Oct. 12

Final Grading Period
All grades must be received by Wednesday, December 18
Viewable online after posting begins Monday, December 16.
Full-term session... Tuesday, December 18
1st 8-week session... Monday, October 22 - Saturday, October 27
2nd 8-week session... Saturday, Dec. 7 - Wednesday, Dec. 11

Graduation/Commencement (All Fall 2024 Sessions)
Priority Graduation Application... Tuesday, August 27
Last day to change primary name or request preferred name... Monday, September 30
Final Graduation Application... Tuesday, October 1
Commencement Activities... Monday, Dec. 16 - Thur., Dec. 19
Commencement tickets & GradPass available... Friday, Nov. 1
Doctoral hooding ceremony... TBA
Degree conferred date... Saturday, December 21

The following deadlines must be met by the dates listed and require visitation to the Office of Graduate Education (OGE) website graduate.utdallas.edu:
Last day to request scheduling of final doctoral oral examination... TBA
Last day to conduct final doctoral exam... TBA
Final day to upload final version of dissertation for review by OGS... TBA
Final day to receive approval of final version of dissertation by OGS... TBA
Final day to upload final version of master's thesis for review by OGS... TBA
Final day to receive approval of final version of master's thesis by OGS... TBA

University Closings

No Classes: Monday, September 2
No Classes: Friday, November 23

Regular Classes: Monday, November 26 - Wednesday, November 28

No Classes: Monday, December 2

No Classes: Thursday, December 20

No Classes: Friday, December 21

No Classes: Saturday, December 22

No Classes: Sunday, December 23

No Classes: Monday, December 24

No Classes: Tuesday, December 25

No Classes: Wednesday, December 26

No Classes: Thursday, December 27

No Classes: Friday, December 28

No Classes: Saturday, December 29

No Classes: Sunday, December 30

No Classes: Monday, December 31
To take a CS 6000 level graduate course and you have a prerequisite leveling course listed in your admit letter:

- Have a transcript showing that you have completed the leveling courses in your undergraduate work
- Petition the Graduate Advisor for approval to enroll in the CS 6000 level course.

**PLEASE NOTE THE LEVELING COURSE WILL NOT BE WAIVED AT THAT MOMENT BY ANY ADVISOR.**

- **YOU MUST APPLY SEPARATELY IN OCTOBER TO WAIVE YOUR LEVELING COURSES** (no guarantee it will be approved then)

- Refer to the UTD Graduate Catalog for Leveling courses.
Transfer/Waiver of Courses

- Transfer/Waiver seminars are scheduled in the second month of each long semester.

- Date and time will be announced mid-late September via UTD email.
Sample degree plans in https://cs.utdallas.edu/education/graduate/ (scroll to bottom)

Select your area of Computer Science Concentration:
- Traditional Computer Science
- Networks and Telecommunications
- Intelligent Systems
- Cyber Security
- Systems Track
- Data Science
- Interactive Computing
- Software Engineering (Must be SE_MS or SE__DR program)

Leveling Courses
- Cross out any not listed in your Admission Letter

Complete Core, Elective, and Leveling Courses
- Enter the course name, number, grade, and semester
  - 22F = Fall 2022
  - 23S = Spring 2023
  - 23U = Summer 2023
Review of Tentative Degree Plan of Study

- Review your Grade Point Average (GPA) in:
  - Core Courses
    - (need 3.19 over the five graduate courses)
  - Elective 6000 level courses
    - (need 3.00 over all)
  - Overall 3.00 or better GPA in UTD Graduate courses
  - Complete any Leveling Courses required by track.

- Submit your AOP to your Graduate Studies Staff member by the first week of classes. This is a University requirement.
  - Otherwise, you will have an enrollment plan hold.

- We suggest you review your Tentative Degree Plan with a Graduate Advisor at least once a year.
Repeat this process at least once every academic year or when changing your track.

Plan your graduation by discussing the degree plan with an advisor. **Must visit with an advisor one semester prior to Graduation.**

CS department offers each core course at least once every academic year.
- Students should plan their schedule carefully.
# Traditional Computer Science Plan

## Core Courses - Traditional

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 6363</td>
<td>Computer Algorithms</td>
</tr>
<tr>
<td>CS 6378</td>
<td>Advanced Operating Systems</td>
</tr>
<tr>
<td>CS 6390</td>
<td>Advanced Computer Networks</td>
</tr>
<tr>
<td></td>
<td><em>Any two of the following;</em></td>
</tr>
<tr>
<td>CS 6353</td>
<td>Compiler Construction</td>
</tr>
<tr>
<td>CS 6360</td>
<td>Database Design</td>
</tr>
<tr>
<td>CS 6371</td>
<td>Structure and Design of Programming Languages</td>
</tr>
</tbody>
</table>
# Data Science Plan

## Core Courses – Data Science

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 6313</td>
<td>Statistical Methods for Data Science</td>
</tr>
<tr>
<td>CS 6350</td>
<td>Introduction to Big Data Analytics</td>
</tr>
<tr>
<td>CS 6363</td>
<td>Design &amp; Analysis of Comp. Algorithms</td>
</tr>
<tr>
<td>CS 6375</td>
<td>Machine Learning</td>
</tr>
</tbody>
</table>

**Any one of the following:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 6301</td>
<td>Special Topic: Social Network Analytics</td>
</tr>
<tr>
<td>CS 6320</td>
<td>Natural Language Processing</td>
</tr>
<tr>
<td>CS 6327</td>
<td>Video Analytics</td>
</tr>
<tr>
<td>CS 6347</td>
<td>Statistics in AI and Machine Learning</td>
</tr>
<tr>
<td>CS 6360</td>
<td>Database Design</td>
</tr>
</tbody>
</table>
Cyber Security Plan

<table>
<thead>
<tr>
<th>Core Courses – Cyber Security</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 6324</td>
</tr>
<tr>
<td>CS 6363</td>
</tr>
<tr>
<td>CS 6378</td>
</tr>
<tr>
<td><em>Any two of the following:</em></td>
</tr>
<tr>
<td>CS 6332</td>
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<tr>
<td>CS 6348</td>
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<tr>
<td>CS 6349</td>
</tr>
<tr>
<td>CS 6377</td>
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</tbody>
</table>

**Must also complete 2 CyS approved Electives.**

Eric Moden will be your DPE and Dr. Jorge Cobb your Academic Advisor
## Core Courses - Intelligent Systems

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 6320</td>
<td>Natural Language Processing</td>
</tr>
<tr>
<td>CS 6363</td>
<td>Design &amp; Analysis of Computer Algorithms</td>
</tr>
<tr>
<td>CS 6364</td>
<td>Artificial Intelligence</td>
</tr>
<tr>
<td>CS 6375</td>
<td>Neural Nets and Machine Learning</td>
</tr>
</tbody>
</table>

Plus one of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>CS 6360</td>
<td>Database Design</td>
</tr>
<tr>
<td>CS 6378</td>
<td>Advanced Operating Systems</td>
</tr>
</tbody>
</table>
Interactive Computing Plan

<table>
<thead>
<tr>
<th>Core Courses – Interactive Computing</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 6326 Human Computer Interaction</td>
</tr>
<tr>
<td>CS 6363 Design &amp; Analysis of Computer Algorithms</td>
</tr>
<tr>
<td>CS 6319 Computational Geometry</td>
</tr>
</tbody>
</table>

*Any two of the following:*

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 6323</td>
<td>Computer Animation &amp; Gaming</td>
</tr>
<tr>
<td>CS 6328</td>
<td>Modeling and Simulation</td>
</tr>
<tr>
<td>CS 6331</td>
<td>Multimedia Systems</td>
</tr>
<tr>
<td>CS 6334</td>
<td>Virtual Reality</td>
</tr>
<tr>
<td>CS 6366</td>
<td>Computer Graphics</td>
</tr>
</tbody>
</table>
## Networks and Telecommunications Plan

### Core Courses - Networks

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 6352</td>
<td>Performance of Computer Systems &amp; Networks</td>
</tr>
<tr>
<td>CS 6363</td>
<td>Computer Algorithms</td>
</tr>
<tr>
<td>CS 6378</td>
<td>Advanced Operating Systems</td>
</tr>
<tr>
<td>CS 6385</td>
<td>Telecommunication Networks</td>
</tr>
<tr>
<td>CS 6390</td>
<td>Advanced Computer Networks</td>
</tr>
</tbody>
</table>
## Systems Degree Plan

### Core Courses – Systems

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 6304</td>
<td>Computer Architecture</td>
</tr>
<tr>
<td>CS 6363</td>
<td>Computer Algorithms</td>
</tr>
<tr>
<td>CS 6378</td>
<td>Advanced Operating Systems</td>
</tr>
<tr>
<td>CS 6396</td>
<td>Real Time Systems</td>
</tr>
</tbody>
</table>

**Any one of the following:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 6349</td>
<td>Network Security</td>
</tr>
<tr>
<td>CS 6376</td>
<td>Parallel Processing</td>
</tr>
<tr>
<td>CS 6380</td>
<td>Distributed Systems</td>
</tr>
<tr>
<td>CS 6397</td>
<td>Synthesis and Opt of High Perf. Systems</td>
</tr>
</tbody>
</table>
## Core Courses - Software Engineering

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SE 6329*</td>
<td>Object Oriented Software Engineering</td>
</tr>
<tr>
<td>SE 6361</td>
<td>Advanced Requirements Engineering</td>
</tr>
<tr>
<td>SE 6362</td>
<td>Advanced Software Architecture and Design</td>
</tr>
<tr>
<td>SE 6367</td>
<td>Software Testing, Validation &amp; Verification</td>
</tr>
<tr>
<td>SE 6387</td>
<td>Advanced Software Engineering Project</td>
</tr>
</tbody>
</table>

* Credit will be given for only one of the following courses if students take them together to satisfy Computer Science and Software Engineering degree plan requirements:
  - **SE 6329** Object-Oriented Software Engineering, and
  - **CS 6359** Object-Oriented Analysis and Design (cannot be used on SE degree plan)
Leveling Courses

- Each track has a set of required leveling courses.
  - These courses must be waived upon admission (i.e., not listed in your admission’s letter), waived during a waver/transfer session, or be taken at UTD.

- In addition,
  - Any levelling course that is a prerequisite for an elective that you choose to take must be also be waived upon admission (i.e., not listed in your admission’s letter), waived during a waver/transfer session, or be taken at UTD

- A levelling course that is not required for your track nor for your chosen electives does not need to be taken/waived
## Leveling Courses for all Degree Plans

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 5303</td>
<td>Computer Science I</td>
</tr>
<tr>
<td>CS 5330</td>
<td>Computer Science II</td>
</tr>
<tr>
<td>CS 5333</td>
<td>Discrete Structures</td>
</tr>
<tr>
<td>CS 5343</td>
<td>Algorithm Analysis &amp; Data Structures</td>
</tr>
<tr>
<td>CS 5348</td>
<td>Operating Systems Concepts</td>
</tr>
</tbody>
</table>
### Additional Levelling Courses per Track

<table>
<thead>
<tr>
<th>Track</th>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Traditional</strong></td>
<td>CS 5349</td>
<td>Automata Theory *</td>
</tr>
<tr>
<td></td>
<td>CS 5390</td>
<td>Computer Networks</td>
</tr>
<tr>
<td><strong>Networks</strong></td>
<td>CS 3341</td>
<td>Probability &amp; Statistics</td>
</tr>
<tr>
<td></td>
<td>CS 5390</td>
<td>Computer Networks</td>
</tr>
<tr>
<td><strong>Systems</strong></td>
<td>CS 5390</td>
<td>Computer Networks</td>
</tr>
<tr>
<td><strong>Software Engineering</strong></td>
<td>CS 5354</td>
<td>Software Engineering</td>
</tr>
<tr>
<td><strong>Cyber Security</strong></td>
<td>CS 5390</td>
<td>Computer Networks</td>
</tr>
<tr>
<td><strong>Data Science</strong></td>
<td>CS 3341</td>
<td>Probability &amp; Statistics</td>
</tr>
</tbody>
</table>

* Only for CS 6353-Compiler Construction & CS 6371-Structure & Design of Programming Languages
Students Seeking this certificate must start the process at least one semester (at the beginning) prior to graduating semester. You apply for the certificate online (like you applied for the MS or PhD). Your DPE will set you eligible to apply for graduation of the certificate if you meet requirements. You must apply to graduate (it is not automatic)

You must apply BEFORE you meet all the requirements

Once admitted to the Cyber Defense certificate program:

To get the certificate you must complete the following five courses with a Cumulative GPA of 3.2 or better

- CS 6324 Information Security
- CS 6348 Data and Application Security
- CS 6349 Network Security
- **CS 6332 Systems Security and Malicious Code Analysis** (recent change)
- CS 6378 Advanced Operating Systems

The conferral date and program will appear on your transcript.

This Certificate is endorsed by NSA
Cyber Ops Transcript Notation

Students Seeking Cyber Ops Notation on transcript must start the process one semester (at the beginning) prior to graduating semester. After the degree plan audit with your advisor, you would send your email request to your DPE for Cyber Op Notation.

Requirement: Must complete 6 core and 2 electives courses from the lists below:

Core Courses
- CS 6324 Information Security
- CS 6332 System Security & Malicious Code Analysis
- CS 6340 Wireless Networks
- CS 6349 Network Security
- CS 6363 Design & Analysis of Computer Algorithms
- CS 6390 Advanced Computer Networks

Elective Courses
- CS 6301 Developing and Securing the Cloud, Edge and IoT
- CS 6335 Language Based Security
- CS 6348 Data and Applications Security
- CS 6377 Intro to Cryptography
- CS 6378 Advanced Operating Systems
- CS 4397 Embedded Computer Systems *
- CS 4398 Digital Forensics *

If you complete the work as detailed above AND Apply to have it added; a note will be added to your transcript.

This Note is endorsed by the NSA

* CS 4397, and/or CS 4398 will not count as an elective in any CS/SE graduate degree plan.
Policies and Procedures

Students:

- must have a signed acknowledgement of policies (AOP) in the file before end of first semester (even earlier or an enrollment hold will be placed).
- must be in the correct program the semester prior to graduation.
- visit with an academic advisor annually for a degree plan audit and the SEMESTER prior to graduation for the grad audit.
- Changing from CS_MSCS to SE_MS or from SE_MS to CS_MSCS requires a New Application.
- Changing from CS_DR to SE_DR or from SE_DR to CS_DR requires a New Application.
The Master’s Thesis option is available in all areas of study in the Computer Science Program.

The Master’s Thesis is recommended for a graduate student who is considering further graduate studies towards a Doctor of Philosophy program.

A Master of Science Thesis replaces two 6000 level electives (minimum of six credit hours)

The Master’s Thesis provides an opportunity for your initial research activities

For more information, visit the Associate Head for Graduate Education.
Once a student is enrolled in thesis, dissertation, or the third practicum, unless a leave of absence has been granted, that student must maintain continuous enrollment (not necessarily for thesis, dissertation, or practicum) of at least three semester hours during consecutive long semesters until the final approved copy of the manuscript has been deposited in the Office of the Dean of Graduate Studies.
Information for International Students

- Students participating in the Industrial Practice Program must enroll in a 1 credit hour course. Students signing up for CPT please contact the Jonsson School Career Services.

- The USCIS has determined that F1 students who are graduating may take only the courses required for graduation/ course completion in their graduating semester.

- Students must get a new Sevis I-20 if they change majors or degree level. The new Sevis I-20 must be signed by the first day of class in the new academic program.

- **For all questions** regarding visa/OPT/reduced enrollment, please talk to the International Student Advisor at the ISSO.
As an F or J visa holder, the US Citizenship and Immigration Service requires that you make progress towards your degree to maintain your immigration status. Additionally, the federal regulation:

“If the student is not required to take any additional courses to satisfy the requirements for completion … the student is considered to have completed the course of study and must take action to maintain status. Such action may include application for OPT, application for change of status or departure from the U.S.”

Please be aware that postponing your graduation can negatively affect your immigration status now and in the future. Postponing graduation can be defined as any of the following:

– Taking any unnecessary classes
– Changing tracks within an academic program for the purpose of delaying graduation

Students with questions need to contact their International Student Advisor at the 972-883-4189 or in person at the ISSO, SSB 3.400

AN EQUAL OPPORTUNITY/AFFIRMATIVE ACTION UNIVERSITY
Academic Integrity
The faculty expects from its students a high level of responsibility and academic honesty. As a general rule, scholastic dishonesty involves one of the following acts: cheating, plagiarism, collusion and/or falsifying academic records. Students suspected of academic dishonesty are subject to disciplinary proceedings. Plagiarism, especially from the web, from portions of papers for other classes, and from any other source is unacceptable and will be dealt with under the university’s policy on plagiarism (see general catalog for details).
Registration Process

- Early registration for Spring 2025 semester starts Nov. 2024.
- Early registration for Fall and Summer 2024 starts in April 2024.
- **Enrollment appointments are placed on your Orion account based on earned hours, and is randomized. It is determined by the Registrar.**
  - It’s your responsibility to check out the schedule online and register in classes.
- If you don’t have any holds, you’ll be able to enroll in classes online. **We strongly recommend not to enroll in more than two core courses from any track.** Also, don’t enroll in three courses which are scheduled on same days.
- **Email:** The university requires all official student email correspondence be sent only to a student’s U.T. Dallas email address and that faculty and staff consider email from students official only if it originates from a UTD student account.
Registration Process

- FERPA will not allow another student to represent you for enrollment. You should not accept another person's enrollment sheet and represent them.

- Nothing can be done by PHONE… Please DO NOT call… Use UTD email for official business.

- Students who go on academic probation (< 3.0 GPA) can enroll in classes ONLY after grades are obtained for the currently enrolled semester and after a visit with the Associate Head for Graduate Education.
Enrollment Holds

• Enrollment holds (due to new student orientation) will be removed early next week
• If you have a “cannot register online” please contact your assigned graduate support staff.
Graduates of Computer Science (GCS) is a student body composed of graduate students that organizes various events for CS graduate students such as hackathons and seminars.

All graduate students are free to reach out to us regarding any query that they have. We encourage you to join GCS and take part in its activities.

Please check out our page on Facebook to know more about us. You can access the page using this QR code.
Connect with Jonsson Career Services!
ECS Student Services Suite (ECSS 2.502)
jonssonschooljobs@utdallas.edu
LinkedIn: @jonssoncareerservices

Services:
➢ Technical Resume Critiques  ➢ Professional Development
➢ Interviewing Preparation  ➢ CPT Authorization
➢ Job Search Strategies  ➢ Internship Class

Check Out JCS
Upcoming Events

https://utd.link/jcsevents
Schedule Planner

1. Log In
   - Sign into GALAXY

2. Locate Schedule Planner
   - Under Orion Self Service
   - Click "Schedule Planner"

3. Add Courses
   - To Take Next Terms

4. Add Breaks
   - To Work Off Times
   - For No Class

5. Generate
   - All Possible Schedules

6. View
   - To See Each Schedule

7. Send to Shopping Cart
   - From the "Now" Screen, Click the "Shopping Cart" Button to Begin Registration
• **YOU MUST APPLY FOR GRADUATION IN ORION in the first week of your graduating semester.**
• The process is NOT automatic, NOR is it done by advisors. YOU have to apply to graduate in Orion.
• There are firm deadlines for applying are in OGE’s webpage https://graduate.utdallas.edu/current_students/deadlines/
• If you miss the deadlines, you will NOT graduate that semester.
For more information:

Visit

cs.utdallas.edu/news/

Contact your academic advisor

https://cs.utdallas.edu/education/graduate-studies/graduate-advising/
The End

THANKS