Welcome

ORIENTATION/GRADUATE DEGREE PLANNING SEMINAR
Spring 2021

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

The University of Texas at Dallas
Welcome – Dr. D.T. Huynh, Interim Department Head
International Student Services Office
GCS
Outreach and IPP
Graduate Advisors Computer Science Program
Master of Science Degree Planning
Areas of Study (Track)
- Traditional Computer Science
- Networks and Telecommunications
- Intelligent Systems
- Information Assurance
- Systems
- Data Science
- Interactive Computing
- MS in Software Engineering
Annual Graduate Degree Planning Form submission
Registration
Immigration Document Verification:

- To meet the U.S. Department of Homeland Security (DHS) arrival document reporting requirement, all new F-1 students must submit a copy of their immigration documents to the International Student Services Office (ISSO) after arrival in the United States.
- Submit a copy of your signed I-20, F-1 visa and Form I-94
- Submit your immigration documents by going to your iComet portal at iComet.utdallas.edu
- Under the ‘Prospective Student’ category, select ‘New Student Check-In’ to upload your immigration documents and complete the Maintaining F-1 Status workshop. All F-1 students must complete both steps
The F-1 full-time enrollment requirement is 12 credit hours for undergraduate students and 9 credit hours for graduate students.

The U.S. government has not yet announced the percentage of classes that must be face-to-face for new F-1 students for the spring 2021 semester.

To assure that you meet the requirement enroll in at least one course that is face-to-face, Hybrid or Hyflex.

The ISSO provides immigration advising assistance to help you manage your immigration status:

- For general information, call the ISSO at 972-883-4189 between 10am and 3pm
- Schedule a Microsoft Teams appointment through our website
- Join one of our weekly Group Chats on CPT or OPT
- Send a message to an advisor and receive a response through your iComet Portal
- Live chat with an ISSO advisor during our advising hours. To chat, look for the “We Are Here” widget during advising hours
THANKS
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.
Graduate Student Assembly

The University of Texas at Dallas

“The Voice of Graduate students on UT Dallas campus!”

Communicate key issues faced by graduate students to the UT Dallas leadership

Provide resources related to improving mental health of graduate students

Promote representation of graduate students on school-wide committees

Organize and host social events like happy hours, game nights, etc. for graduate students every semester

Collaborate with Office of Graduate Education, Student Wellness Center, Student Counseling Center

Who can reach out to us?
Any graduate student enrolled at UT Dallas (Masters/PhD, TA/RA, etc.) about topics including, but not limited to:

- Academics
- Research & Faculty Mentors
- Mental Health
- Campus, school, and department life

Jonsson School Representative 2020-21
Satwik Dutta
satwik.dutta@utdallas.edu

Email us gradstudentassembly@utdallas.edu

@gsa_utdallas
facebook.com/GSAUTD/

The Graduate Student Assembly is a registered student organization at The University of Texas at Dallas. All graduate students of UT Dallas are considered members and eligible to participate in the Graduate Student Assembly. Membership shall be open to students of UT Dallas regardless of sex, race, color, religion, age, national origin, disability, or veteran status. Membership must be limited to UT Dallas students, faculty, and staff.

The Erik Jonsson School of Engineering and Computer Science
Outreach to the Community

- Coding Contests, school visits, 200+ summer camps every year!!! Details @ utdallas.edu/k12
- Current Students - are the instructors for coding clubs & summer camps
- Lunch-time tech-talks every semester. Taught by Industry Professionals, Alumni, Faculty & experienced College Students
- Details @ meetup.com/utdcors OR facebook.com/UTDCSDept/events
- Great networking opportunity with alumni and professionals!
Many student organizations

- Association for Computing Machinery (ACM)
- Grads of Computer Science
- Women Who Compute
- AI Society
- Virtual Reality Society
- Computer Security Group
- Open Source Society

Hackathons:

- UTD generally has one big hackathon, HackUTD, and smaller ones such as HackAI, Blockchain, and others. Due to COVID-19, timing and formats are under discussion.
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- Information Assurance
- Systems
- Data Science
- Interactive Computing
- MS in Software Engineering
Annual Graduate Degree Planning Form submission
Registration
**COMPUTER SCIENCE DEPARTMENT**

**GRADUATE ADVISORS**

---

**Prof. Laurie Thompson**  
ECSS 3.701  
972.883.6326  
lthomp@utdallas.edu  
MS (not Thesis) last names A – K

**Prof. Pushpa Kumar**  
ECSS 4.407  
972.883.6904  
pkumar@utdallas.edu  
MS (not Thesis) last names L – P

**Prof. Tim Farage**  
ECSS 3.609  
972.883.4836  
tfarage@utdallas.edu  
MS (not Thesis) last names Q – Z

**Prof. Shyam Karrah**  
ECSS 3.907  
972.883.4197  
skarrah@utdallas.edu  
All PhD  
All MS - Thesis, and IA and SE Tracks

---

No advising can be done by PHONE...**DO NOT call**...Thank You.

The Erik Jonsson School of Engineering and Computer Science
CS Graduate Studies Advisors

Prof. Shyam Karrah
Prof. Pushpa Kumar
Prof. Laurie Thompson
Prof. Tim Farage

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

COMPUTER SCIENCE DEPARTMENT
Graduate Studies STAFF

INSIDE the SUITE 3.908

Mrs. Emily Lenart-Donaldson  ECSS 3.905  972-883-4278  eldonaldson@utdallas.edu
CS_MSCS A-J (Not IA track, Not Thesis)

Ms. Rachel Spataro  ECSS 3.906  972-883-4194  rachel.spataro@utdallas.edu
CS_MSCS K-P (Not IA track, Not Thesis); ALL SE_MS (Not Thesis or PhD Masters)

Mr. Eric Moden  ECSS 3.904  972-883-4705  eric.moden@utdallas.edu
CS_MSCS Q-T; All IA track students (Except PhD Masters and Thesis MS)

Mr. Jesus Mata  ECSS 3.902  972-883-6175  jesus.Mata@utdallas.edu
CS_MSCS U-Z (Not IA track, Not Thesis)

Mr. Doug Hyde  ECSS 3.908B  972-883-6612  dhyde@utdallas.edu
All PhD; All PhD with Masters; All MS with a Thesis (all tracks)

Mrs. Nirmala Manalan  ECSS 3.903  972-883-4216  nirmala.Manalan@utdallas.edu
Admission Processor

The STAFF members are NOT Graduate ADVISORS. For any questions on classes, choosing a degree plan.. etc, contact your Graduate Advisor.

The Erik Jonsson School of Engineering and Computer Science
Prof. Laurie Thompson  ECSS 3.701  972.883.6326  lthomp@utdallas.edu  
MS (not Thesis) last names A – K

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All PhD  All MS - Thesis, and IA and SE Tracks

No advising can be done by PHONE...DO NOT call...Thank You.
Master of Science in Computer Science (33 credit hours)
- Traditional Computer Science
- Networking and Telecommunications
- Intelligent systems
- Information Assurance
- 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 EE Departments
- Computer Engineering & Telecommunications Engineering
Master of Science Degree Plan

- Department of Computer Science MS Requirements
  - Five Core Courses from one of the tracks
  - Six approved electives; at least five must be at 6000 or higher level and one approved elective can be a 5000* or a 6000 level course in.
  - All requirements including transfer credit must be completed in a six year window.
  - GPA requirements:
    - Core GPA ≥ 3.19
    - Elective GPA ≥ 3.00
    - Overall GPA ≥ 3.00

(* All degree plans except information assurance track)
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 best grade will be used; both grades will appear in the transcript; one will not impact the GPA.

Please check the graduate catalog for all other policies and procedures.

http://catalog.utdallas.edu/2020/graduate/home
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 will have:

- assigned Advisors and MS DPEs by last name alpha, Track and/or Thesis option.

*Subject to new university policies
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/graduateadvisors

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/admit/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 972-883-2974. You may also find important information on our web site at http://www.ecs.utdallas.edu.

c: file

ECS CS F

AN EQUAL OPPORTUNITY/AFFIRMATIVE ACTION UNIVERSITY
Your official admissions letter may state any required prerequisites recommended by the admissions committee.

In case you have not seen your prerequisites or missed it in your emails, contact a staff member to check out your prerequisites.

You are responsible for any prerequisites required for your Degree Plan (track) and also for any course you choose.
Admission Prerequisites

- Students from Non CS/Related backgrounds MUST complete the following MINIMUM prerequisites:
  - CS5303 (Computer Programming)
  - CS 2340 or CS 3340 or CS 5330 (Computer Architecture)
  - CS 5333 (Discrete Structures),
  - CS 5343 (Data Structures & Algorithm Analysis) and
  - CS 5348 (Operating Systems).

- You must COMPLETE your assigned 5000 level courses applicable to your degree plan in the first year of study.
If a 5000 level course is not offered, or if you have a scheduling conflict, a graduate advisor may approve the undergraduate equivalent course.

- *The undergraduate course grade is not computed towards your graduate GPA.

Supported students must take 9 graduate hours.

All prerequisites in your degree plan must be completed at the time of CPT assignment.
If you are choosing IA, IC or SE degree plan, you must try to complete the required core and elective 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 and specially summer semester.
Core Courses

- Students planning to pursue PhD program in the near future should enroll in the QE sections and sign up for the Qualifying exam to strengthen their application.

- PhD students should enroll in QE sections of the core courses even if the QE sequence is completed.

- Department awards Certificate of excellence in academics to those students who maintain 3.9* or higher GPA.

*may change depending on the semester
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>A</td>
<td>4.00</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
Things you can do every semester to receive the best assistance and information

Early registration for spring semester takes place in November and for the summer & fall starts in April; enrollment appointments are placed on your Orion account based on earned hours, and it is randomized. It’s your responsibility to check out the schedule online and register for classes online.

If you know the courses you wish to take and have no prerequisites or holds on your account, you may Enroll online. The staff members assigned for your alpha can answer some general questions regarding course schedules, give out transfer/waiver forms, help with your graduation application or schedule appointments with a graduate advisor.

Students are strongly recommended NOT to register in more than TWO CORE COURSES from any degree plan.
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
  - Final Defense
  - Graduation
  - The dates update constantly.
  - Confirm the date ONLINE not on paper.
Enrolling, Dropping or Swapping

- The Last day to add/Swap Courses is January 11th (pls check the actual dates online on Spring 21 schedule).

- **DO NOT** drop classes online.

- For any Add, Drop or Swap please visit with a CSGS Advisor.
Sample Academic Calendar

Academic Calendar Spring 2021

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 ........................................... Tuesday, January 19
1st 8-week session ........................................... Tuesday, January 19
2nd 8-week session ........................................... Tuesday, March 22

Web Registration
Enrollment appointments available online. Monday, October 19
All students should check their enrollment appointment details in Orion for the date and time they may begin registering.

Schedule Planner Available ................................ Monday, October 19
Online add/drop/applies ends ......................... Monday, January 25

Last Day for Re-admission/Re-entry .............. Sat., January 19
Last Enrollment from Waitlist ....................... Friday, January 15

Last Day for Regular Registration
Full-term session ........................................... Thursday, January 14
1st 8-week session ........................................... Thursday, January 14
2nd 8-week session ........................................... Thursday, March 18

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 minimum $100 late registration fee. See Barron’s Office information.

Full-term session ............. Friday, January 15 – Tues., January 25
1st 8-week session ............... Friday, January 15 – Tues., January 25
2nd 8-week session ............... Friday, March 10 – Monday, March 29

Census Day (State Reporting Date) ............ Wednesday, February 3
1st 8-week session ........................................... Tuesday, January 20
2nd 8-week session ........................................... Tuesday, March 29

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

Full-Term Session
Last day to drop a class without a "W" .... Wed., Feb. 3
Undergraduate Courses
Approval required ................. Thurs., Feb. 4 – Mon., April 5
WL begins ........................................... Wednesday, March 3
WL ends ........................................... Monday, April 5
Graduate Courses
Withdrawal Ends ........................................... Monday, April 5

1st 8-Week Session
Last day to drop a class without a "W" .... Tues., Jan. 26
Undergraduate Courses
Approval required ................. Wed., Jan. 27 – Mon., Feb. 22
WL begins ........................................... Wednesday, February 10
WL ends ........................................... Monday, February 22
Graduate Courses
Withdrawal Ends ........................................... Monday, February 22

2nd 8-Week Session
Last day to drop a class without a "W" .... Mon., Mar. 29
Undergraduate Courses
Approval required ................. Tues., Mar. 30 – Mon., April 5
WL begins ........................................... Tuesday, April 23
WL ends ........................................... Monday, April 28
Graduate Courses
Withdrawal Ends ........................................... Monday, April 28

Last Day of Classes (Not including final exams)
Full-term session ...................................... Saturday, May 8
1st 8-week session ...................................... Saturday, March 6
2nd 8-week session ...................................... Saturday, March 6

Reading Days (Study days prior to final exams)
Full-term & 2nd 8-week sessions only .......... Sunday, May 9

Final Exams
Full-term session ............... Monday, May 10 – Sat., May 15
1st 8-week session ............... Monday, May 10 – Sat., May 15
2nd 8-week session ............... Monday, May 10 – Sat., May 15

Mid-Term Grades Due and Viewable Online
All midterm grades must be submitted online.
Midterms (undergraduate courses only) ........ Sat., March 13

Final Grading Period
All grades must be received by Monday, May 17.

Graduation/Commencement (All Spring 2021 sessions)
Graduation Application ............... Thursday, February 4
Last day to change your primary name which will be printed on your diploma .......... TBA
Honor’s Convocation ......................... TBA
Commencement Activities .......... TBA
Commencement tickets available online .......... TBA
Doctoral Hooding Ceremony ........ TBA
Degree conferral date ............ Saturday, May 22

The following deadlines must be met by the dates listed and require submission to the Office of Graduate Education (OGE) website: graduate.utdallas.edu

Last day to request scheduling of final doctoral oral examination .......... Tuesday, March 23
Last day to conduct final doctoral exam .......... Tuesday, April 6
Final day to upload final version of dissertation for review by OGE .......... Tuesday, April 13
Final day to receive approval of final version of dissertation by OGE .......... Tuesday, April 27
Final day to upload final version of master’s thesis to review by OGE .......... Thursday, April 15
Final day to receive approval of final version of master’s thesis by OGE .......... Thursday, April 29

For OGE Priority Deadlines, visit the deadlines page.

University Closings
Marie Luther King Day ............... Monday, January 18
Spring Break ......................... Monday, Mar. 15 – Sun. Mar. 21

Incomplete grades due for undergraduates and graduates from previous long semester ........ Monday, March 15

The Erik Jonsson School of Engineering and Computer Science
To take a CS 6000 level graduate course:

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

PLS NOTE THE PREREQUISITES WILL NOT BE WAIVED TODAY BY ANY ADVISOR.

YOU MUST APPLY SEPARATELY IN FEBRUARY TO WAIVE YOUR PREREQUISITES.

Refer to the UTD Graduate Catalog for prerequisites.
Transfer/Waiver of Courses

- Transfer/Waiver seminars are scheduled in the second month of each long semester. The tentative Spring semester seminar dates (Tentative) are:
  - February 17th from Noon to 1PM
  - February 19th from 5:00pm – 6:00pm.
- Date and time will be announced late January.
- Due date of T/W applications is 4pm on Friday, March 5th. The completed applications must be Emailed to dhyde@utdallas.edu
Transfer/Waiver of Courses

- Students from Non CS/Related backgrounds **MUST** complete the following **MINIMUM** prerequisites:
  - CS 2340 or CS 3340 or CS 5330 (Computer Architecture)
  - CS 5333 (Discrete Structures),
  - CS 5343 (Data Structures & Algorithm Analysis) and
  - CS 5348 (Operating Systems).

- The above prerequisites generally will not be waived for the students from Non CS/Related backgrounds.

- Students who plan to waive prerequisite courses and/or transfer graduate courses are strongly suggested to visit with program/advising office to check for eligibility.

- Students who are not qualified to apply for waivers must take the pre-requisites.
Tentative Degree Plan of Study

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

Prerequisites
- Cross out any not listed in your Admission Letter

Complete Core, Elective, and Prerequisite courses
- Enter the course name, number, grade, and semester
  - 21S = Spring 2021
  - 21U = Summer 2021
  - 21F = Fall 2021
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 Prerequisite Courses required by track.

Submit your AOP to your Graduate Studies Staff member by the first week of February

Otherwise, you will have a degree plan hold.

Review your Tentative Degree Plan with a Graduate Advisor.
Computer Science Degree Plan

DEGREE PLAN
UNIVERSITY OF TEXAS AT DALLAS
MASTER OF COMPUTER SCIENCE

COMPUTER SCIENCE DEGREE PLAN

Name of Student: ________________________________________________

Student I.D. Number: ______ / _____ / ________

Anticipated Date of Admission to Program: _______________  
Graduation: _______________

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Course Number</th>
<th>UTD Semester</th>
<th>Transfer</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>CORE COURSES</td>
<td>(15 Credit Hours)</td>
<td></td>
<td>3.2 Grade Point Average Required</td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td>CS 6XXX</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Name</td>
<td>CS 6XXX</td>
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<tr>
<td>Name</td>
<td>CS 6XXX</td>
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</tr>
</tbody>
</table>

FIVE APPROVED 6000 LEVEL ELECTIVES (15 * Credit Hours) 3.0 Grade Point Average

1
2
3
4
5

Additional Electives (3 Credit Hours minimum)

6
7
8

Other Requirements

<table>
<thead>
<tr>
<th>Admission Prerequisites</th>
<th>Course Number</th>
<th>UTD Semester</th>
<th>Waiver</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>CS 5XXX</td>
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<tr>
<td>Name</td>
<td>CS 5XXX</td>
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<td></td>
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</tbody>
</table>

* May include any 6000 or 7000 level CS course without prior permission

Academic Advisor ___________________________  Date Submitted _____ / _____ / _____
## Core Courses - Traditional

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course 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>
</tbody>
</table>

*Any two of the following:*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<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

<table>
<thead>
<tr>
<th>Core Courses – Data Science</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 6313</td>
</tr>
<tr>
<td>CS 6350</td>
</tr>
<tr>
<td>CS 6363</td>
</tr>
<tr>
<td>CS 6375</td>
</tr>
</tbody>
</table>

**Any one of the following:**

| CS 6301  | Special Topic: Social Network Analytics   |
| CS 6320  | Natural Language Processing               |
| CS 6327  | Video Analytics                           |
| CS 6347  | Statistics in AI and Machine Learning     |
| CS 6360  | Database Design                           |
# Information Assurance Plan

## Core Courses – Information Assurance

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 6324</td>
<td>Information Security</td>
</tr>
<tr>
<td>CS 6363</td>
<td>Design &amp; Analysis of Computer Algorithms</td>
</tr>
<tr>
<td>CS 6378</td>
<td>Advanced Operating Systems</td>
</tr>
</tbody>
</table>

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**Any two of the following:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 6332</td>
<td>System Security &amp; Malicious Code Analysis</td>
</tr>
<tr>
<td>CS 6348</td>
<td>Data and Application Security</td>
</tr>
<tr>
<td>CS 6349</td>
<td>Network Security</td>
</tr>
<tr>
<td>CS 6377</td>
<td>Introduction to Cryptography</td>
</tr>
</tbody>
</table>

---

- No 5xxx courses can be applied to this track.
- Must also complete 2 IA approved Electives.

Eric Moden will be your DPE and Shyam Karrah your Academic Advisor.

The Erik Jonsson School of Engineering and Computer Science
### 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>
</tr>
</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>

The Erik Jonsson School of Engineering and Computer Science
## Interactive Computing Plan

<table>
<thead>
<tr>
<th>Core Courses – Interactive Computing</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 6326</td>
</tr>
<tr>
<td>CS 6363</td>
</tr>
</tbody>
</table>

**Any three of the following:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</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>
## Core Courses - Networks

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</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 Code</th>
<th>Course Name</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 Code</th>
<th>Course Name</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>

## Suggested Elective

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 6398</td>
<td>DSP Architecture</td>
</tr>
</tbody>
</table>
# Software Engineering Plan & PROGRAM

## Core Courses - Software Engineering

<table>
<thead>
<tr>
<th>Course</th>
<th>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:
- CS 6329 Object-Oriented Software Engineering, and
- CS 6359 Object-Oriented Analysis and Design (cannot be used on SE degree plan)*

Rachel Spataro will be your DPE and Shyam Karrah your Academic Advisor

The Erik Jonsson School of Engineering and Computer Science
# Prerequisites

## Common Prerequisites 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/CS 2340</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 Prerequisites

<table>
<thead>
<tr>
<th>Traditional</th>
<th>Software Engineering</th>
<th>Information Assurance</th>
<th>Data Science</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 5349</td>
<td>Automata Theory *</td>
<td></td>
<td>CS 3341</td>
</tr>
<tr>
<td>CS 5390</td>
<td>Computer Networks</td>
<td>CS 5390</td>
<td>Probability &amp; Statistics</td>
</tr>
<tr>
<td>CS 5390</td>
<td>Computer Networks</td>
<td></td>
<td>CS 3341</td>
</tr>
<tr>
<td><strong>Networks</strong></td>
<td><strong>Software Engineering</strong></td>
<td><strong>Information Assurance</strong></td>
<td><strong>Data Science</strong></td>
</tr>
<tr>
<td>CS 3341</td>
<td>Probability &amp; Statistics</td>
<td>CS 5390</td>
<td>CS 3341</td>
</tr>
<tr>
<td>CS 5390</td>
<td>Computer Networks</td>
<td></td>
<td>Probability &amp; Statistics</td>
</tr>
<tr>
<td><strong>Systems</strong></td>
<td><strong>Software Engineering</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CS 5390</td>
<td>Computer Networks</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Only for CS 6353-Compiler Construction & CS 6371-Structure & Design of Programming Languages

The Erik Jonsson School of Engineering and Computer Science
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.
Graduate Certificate in Information Assurance

Students Seeking IA Certificate must start the process one semester (at the beginning) prior to graduating semester. After the degree plan audit with your advisor, you would ask your DPE to set you eligible to apply for the Certificate as well as your MS degree.

The Certificate must be applied for just as you applied for the MS or PhD program. Use the same application method and choose CSND_INASCERT.

Once admitted to the INASCERT 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 6363 Design & Analysis of Computer Algorithms
- CS 6378 Advanced Operating Systems

The conferral date and program (INASCERT) 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 request to your DPE for Cyber Op Notation.

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

**Core Courses**

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

**Elective Courses**

- ACCT 6336 Info Tech Audit and Risk Mgmt *
- CE 6301 Advanced Digital Logic
- CS 6301 Secure Cloud Computing
- CS 6377 Intro to Cryptography
- CS 6396 Real Time Systems
- CS 7301 Cyber-physical Systems Security
- CS 6378 Advanced Operating Systems
- CS 6302 Microprocessor Systems
- CS 4397 Embedded Computer Systems *
- CS 4398 Digital Forensics *

* ACCT 6336, CS 4397, and/or CS 4398 will not count as an elective in any CS/SE graduate degree plan.

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

The Erik Jonsson School of Engineering and Computer Science
Students:

- must have a signed acknowledgement of policies (AOP) in the file before Mid term of first semester (March).
- must be in the correct Program 2 semesters before graduation.
- 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**. (Adding an MS to a PhD requires a **New Application**.
- visit with an academic advisor annually for a degree plan audit and the **SEMESTER** prior to graduation for the grad audit.
- Choosing to miss more than a week of classes at the beginning of the semester may result in your being dropped or swapped into another course.
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

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.

We have one DPE for MS thesis…Doug Hyde
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.
Students participating in the Industrial Practice Program must enroll in a 1 credit hour course. This course cannot be used towards the graduation requirements. Students signing up for CPT must visit with a Graduate Advisor.

The USCIS has determined that F1 students who are graduating may take only the courses required for graduation/ course completion in their final 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 8CFR(f)(6)(iii)(C) states:

“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: \textit{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).
The Erik Jonsson School of Engineering and Computer Science

Attendance Policy

• The department strongly recommends that students must regularly attend classes. Student’s who regularly attend classes and pay attention to the lecture tend to make significantly higher grades than those who don’t.

• The CS Department does not allow any official auditing of courses. The department also recommends that students should be sitting only in the classes they’ve signed up for.
**TRAVEL:** It is very important for those who plan to travel (say to their home country) between semesters should schedule travel only after verifying Final Exam dates, QE dates and First day of next semester.

**Email:** The university encourages 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

• All the new CS graduate students can enroll online. In case, you need advising, the advisors will be available tomorrow at 8:30am.

• **Courses WILL NOT be waived at the orientation.** The waiver seminar is going to be in February and students planning to waive courses must submit the waiver application in February to get the courses waived. The date and time of Transfer/Waiver session the information session will be emailed sometime end of January.
## Registration, Add, Drop & Withdrawal Form

This form must be returned to the Registrar’s Office to ensure processing. Refer to the online class schedule, [www.utdallas.edu](http://www.utdallas.edu), to determine advisor approval. Please print legibly.

### Student Information
- **Student Name:**
  - Last Name: __________
  - First Name: __________
- **UTD-ID:** __________
- **Semester:**
  - Fall
  - Spring
  - Summer

### Registration/Add/Drop/Withdrawal

In the first column below, circle the code that corresponds to your enrollment request:

<table>
<thead>
<tr>
<th>R = Register</th>
<th>D = Drop</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>D</td>
</tr>
<tr>
<td>R</td>
<td>D</td>
</tr>
<tr>
<td>R</td>
<td>D</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>5-Digit Class Number</th>
<th>Subject Prefix</th>
<th>Course #</th>
<th>Section #</th>
<th>Credit Hours</th>
</tr>
</thead>
</table>

### Withdrawal From UTD
- I do not plan on returning to UTD.
- [ ] (WU)

### Class Withdrawal Reason
- [ ] Academic Reasons
- [ ] Non-Academic Reasons

**Undergraduates:** If your withdrawal is for any non-academic reason, you must submit a petition to withdraw through the Director of Undergraduate Advising. If you do not submit a petition in a timely manner, your withdrawal will be treated as an academic withdrawal.

**Exceptions:** Any registration, add or withdrawal attempts made past the deadlines listed in the Academic Calendar must be approved by the School or Associate Dean and the Undergraduate or Graduate Dean.

I understand it is my responsibility to withdraw from courses for which I am not prepared to succeed and do not attend, and it is my responsibility to read and understand the deadlines for refunds and for dropping classes according to the Academic Calendar. I further understand and agree that payment for tuition and fees is due by the published date in the Academic Calendar to avoid cancellation of my classes. I also understand that any refund will be based on the refund schedule set forth in section 54.006 of the Texas Education Code published in the UTD Catalog. Please note: All withdrawals are subject to the rules and deadlines in the Academic Calendar.

### Signature
- **Student:** __________________________  **Date:** __________
- **School/Associate Dean:** __________________________  **Date:** __________
- **Advisor:** __________________________  **Date:** __________
- **Under/Graduate Dean:** __________________________  **Date:** __________

**Attention F-1 and J-1 Students:** Withdrawing from courses may have immigration consequences. These include the need to apply for updated immigration documents. Ensure that you understand the potential consequences to your immigration status prior to withdrawing from any courses.
Dissertation and beyond: Ph.D. in CS/SE at UTD

Dr. Jorge Cobb
Chairman of the Doctoral Committee
Computer Science
University of Texas at Dallas
Timeline

- **Year 1**: Coursework, qualifying exams, exploration of research areas. Find a research advisor.
- **Year 2**: Read papers, identify problems to solve, start working on research
- **Year 3**: Form dissertation committee, complete thesis proposal, start publishing papers
- **Year 4**: Continue publishing papers, write and defend dissertation, look for a job
Course work

- 5 Core classes from a chosen MS track plus
- CS 6382: Theory of Computation plus
- at least 5 courses at the 6000 level and
- 2 approved 7000 level CS/SE courses
- Other classes and research/dissertation hours approved by your adviser
- Total of 75 hours beyond B.S. degree
  - Excluding Pre-requisite graduate hours
- Up to 36 hours can be transferred from M.S. degree from other institutions; if approved.
All prerequisites marked in your admission email corresponding to the chosen M.S. track (of core courses) must be completed within the first year of study.

Apply for waiver of prerequisites that you believe have been completed in your prior coursework.

Transfers/waivers are processed only once each semester (around the second month of each semester). Watch for email announcements.

All requests for transfers/waivers must be made in the first two semesters.
Qualifying exams

- Qualifying exams (QE) for any 3 core areas:
  - Object Oriented Software Engineering (6329)
  - Performance of Computer Networks (6352)
  - Database Design (6360)
  - Software Architecture and Design (6362)
  - Computer Algorithms (6363)
  - Artificial Intelligence (6364)
  - Software Testing, Valid’n & Verific’n (6367)
  - Advanced Programming Languages (6371)
  - Machine Learning (6375)
  - Advanced Operating Systems (6378)
  - Advanced Computer Networks (6390)

- F/T PhD must pass the 3 QEs within first 2 long semesters.
  - No QE in the summer semester.
  - P/T PhD get 1 additional semester.

- Plan your QE schedule carefully.
- Prepare well and pass the exams in the first attempt.
- Each core course is guaranteed to be offered once every academic year, and once every calendar year in the evening, but NOT guaranteed once every semester.
- Learn to structure your answers well: intuitive explanation followed by a full analysis

The Erik Jonsson School of Engineering and Computer Science
Finding an area of study & adviser

- Choose an area based on your interests, strength, and career prospects

- You are likely to work in this area for the next 10 years, if not 30-40 years

- Don’t decide solely based on who is able to offer an assistantship

- Choose a compatible adviser, who is a good match to your working style
Areas of strength in UTD-CS/SE

- Networking and Telecommunications
  - Wireless networks, protocols, optical networks, distributed systems

- Software Engineering
  - Embedded systems, Verification & testing, Requirements engineering

- Intelligent Systems
  - Artificial intelligence, Computer Vision, Natural language processing, Expert systems

- Computer Systems
  - Databases, Visual programming, Multimedia systems, Computer security, High performance systems

- Algorithms and Applications
  - Algorithms, Optimization problems, Computational geometry, Computational biology

Surf the faculty home pages
Getting started in your research

- Literature survey: study the results in your area. You cannot create new knowledge without knowing what is already known.
- Find new, interesting problems in which you can do research. Guidance of your adviser is very important in choosing the “right” problem.
- Learn to read research articles quickly.
- Continue to read new papers in journals and conferences in your area regularly.
- Keep looking for new problems to solve.
You are making good progress if ...

- You are publishing in:
  - reputed journals (ACM / IEEE / SIAM)
  - reputed conferences

- Your work is cited by other leading researchers

- Your work spawns follow-up papers

- Balance quality and quantity

- Your Faculty Supervisor says so!
Balance quality and quantity

- Publish good quality work, often
- Always have several problems on which you are working
- Spend a lot of time (in concentrated doses) working on your research
- Discuss your ideas with your colleagues
- Keep on the lookout for new papers/ideas/problems

Publish or Perish!
Improving the chances of getting an Assistantship

- Get good grades
- Make steady progress
- Pass 3 qualifying exams (QEs)
- Publish papers in reputed conferences and journals
- Try to graduate in 4 years
- Find a Faculty Supervisor who is not over extended!
Finding an academic job

- It may be better to find a postdoc position first in a reputed place.
- Need publications in prominent places, in areas where there are openings.
- Meet other people in conferences and workshops and make friends (network!)
- Give invited talks in other universities, labs
Getting more information

- Dean of Graduate Education:
  https://graduate.utdallas.edu/
  Graduate catalog  https://catalog.utdallas.edu

- CS Department Web site
  http://cs.utdallas.edu/

- Ph.D. information in CS Web site:
  http://catalog.utdallas.edu/now/graduate/programs/ecs/

- Frequently Asked Questions
  http://cs.utdallas.edu/education/graduate/graduate-faq/
  Dr. Jorge Cobb (cobb@utdallas.edu)  ECSS 4.208
Steps

- Course work
- Qualifying exams
- Choosing area of research and adviser
- Getting started on research
- Dissertation committee
- Dissertation proposal
- Dissertation submission
- Finding a (academic) job
Useful Skills

- Time management
- Speed-reading of technical articles
- Deep understanding of state-of-the-art and current methods
- Formulation of new problems
- Quick evaluation of new problems and solution methods (to decide if they are worth pursuing)
Any Questions?