### Department of Computer Science

**PhD Course Schedule**

**University of Arizona**

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**Major Course Requirements (36 Units)**

**CORE†** (18 units total, 4 core courses in 3 areas, and another 2 core courses in any area)

**Computing Systems**
- 525 Principles of Computer Networks
- 552 Adv OS
- 553 Compilation
- 576 Computer Architecture

**Software Systems**
- 520 Program Languages
- 522 Parallel and Distributed Computing
- 560 Database Systems Implementation

**Theory and Algorithms**
- 545 Design and Analysis of Algorithms
- 573 Computation

**Applications**
- 533 Computer Graphics
- 537 Computational Geometry

**Artificial Intelligence**
- 577 Introduction to Computer Vision

Colloquia 695A (1 unit)

**Research Project 695C** (4 times in 5 semesters)

**Electives**
(≥ 500 Level; ≥ 6 units)

**Minor** (9-12 units)

**920 Dissertation** (18 units)

**Qualifying Exam**

**Comprehensive Exam**
- Major/Minor/Oral
- Final Oral

Non-CSc units at 400-level (≤6) __________

Units graded A,B,C (≥33) __________

†Courses taken to fulfill Core requirements cannot also be used to fulfill other course requirements
Overall Course Requirements

- 63-66 units total, divided as 36 major units, 9-12 minor units and 18 dissertation units. The number of required minor units may vary; 12 is typical.
- At least half the required units (33 units) must be in courses graded A,B,C,D,E. That is, no more than half can be graded S/P,C,D,E or S/P,E (typically Independent Study or Thesis courses). No "Pass/Fail" courses allowed.
- The Graduate College permits at most six units of 400-level (non-graduate) courses to be part of the degree program; such units must be in courses outside of the major department.
- Deficiencies must be cleared by advisor.
- Cumulative graduate Grade Point Average (GPA) to graduate is ≥ 3.00. Grade replacement (GRO) on one CS course for which a D or E was received is permitted.
- Core courses must have a minimum cumulative GPA of 3.50.

Major

- There are six required core courses: 4 core courses in 3 areas, and another 2 core courses in any area. These can be transferred if equivalent material has been taken elsewhere. The remaining 18 units should consist of at least 6 units at the 500 level or above, 1 unit of Research Colloquia (695A) and at least 12 units of Research project (C SC695C). The 600-level courses can be Advanced Topics, Seminar (696), or Independent Study (699) offerings.

Minor

- Minor programs are specified by the minor department. They consist of at least 9 units and typically 12 units. Minor programs can often be split across two departments; consult with an advisor in the minor department(s).

Transfer of Work

- At least 30 units of graduate credit must be completed at Arizona.
- Transfer of courses must be approved by faculty advisor upon submission of the Plan of Study.
- Minor as well as major courses can be transferred.
- Only grades of A or B can be transferred. Only graduate courses can be transferred. Extension courses cannot be transferred. Transfer units and grades will not be used in computing Grade Point Average (GPA).
- Quarter system units will be proportionally converted to semester units.

Qualifying Examination

- Complete the portfolio requirements and submit the portfolio for examination.
- Taken within 5 semesters of admission to PhD program.
- The minor qualifier may be waived by the minor department.

Doctoral Degree Plan of Study

- Signed by major and minor advisors and major and minor department heads.
- Must be submitted in 3rd semester of residence and prior to Comprehensive Examination.

Comprehensive Examination

- Written part consists of the thesis proposal.
- Oral thesis proposal given to the Doctoral Committee of at least three Major and one Minor professors
- Oral Comprehensive held no later than 3 months before the Final Defense.
- Request to schedule the exam is due seven working days before the date of the examination.

Advancement to Candidacy

- Automatically Advances to Candidacy immediately after successful completion of Comprehensive exam.

Committee Appointment:

- When the student has an approved doctoral Plan of Study on file, has satisfied all course work and residence requirements, and passed the Comprehensive Examination, he or she must file a Committee Appointment form. This application must be submitted as soon as requirements are met but no later than six months before the Final Defense.

Final Defense

- Oral examination in defense of the completed dissertation, including any general questioning which may develop related to the field of study.
- Scheduled with Graduate College at least seven working days before the date of the examination.
- Open to the public, except for Committee deliberations.

Other Requirements

- Refer to the Graduate College website for other Graduate College policies and deadlines, http://grad.arizona.edu/academics.