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1. Program Description
The Department of Computer Science and Engineering offers graduate degrees that provide a well-rounded education in computing. Our students gain experience with both hardware and software and learn how to blend technical expertise with creative problem-solving skills to push technological boundaries, create automated solutions to human problems and build better computing systems. A versatile degree program and the opportunity to work with faculty who specialize in various areas, prepares our graduates to take full advantage of the diverse job opportunities available for computer experts.

1.1. Program/Student Learning Outcomes (SLOs)
Our graduates will have:
   a. An ability to apply engineering and computer science research and theory to advance the art, science and practice of the discipline.
   b. An ability to design and conduct experiments as well as to analyze, interpret, apply and disseminate the data.
   c. An understanding of research methodology.

1.2. Graduate Degrees Offered
Graduate programs offered lead to the degrees of:
   - MS in Computer Science and Engineering
     - Thesis option (Plan A)
     - Non-thesis option (Plan B)
   - PhD in Computer Science and Engineering

and special programs on:
   - Graduate certificate in Cyber Security
   - Accelerated BS/MS program
   - Accelerated BS/MBA program

Master of Science in Computer Science and Engineering (MS in CSE): An advanced degree focusing on the development of complete computing systems. The master’s degree program offers an integrated course of study covering the theory, implementation and design of information, computing, and communication systems.

Doctor of Philosophy in Computer Science and Engineering (PhD in CSE): An advanced degree that emphasizes a synthesis of Computer Science and Computer Engineering. The Department of Computer Science and Engineering at the University of Nevada, Reno offers an in-depth, cutting-edge curriculum for those graduate students seeking the degree of doctor of philosophy in computer science and engineering. Students are involved in many aspects of original research, advancing scientific knowledge in specific areas.

Graduate Certificate in Cyber Security: The graduate certificate in cyber security uses an interdisciplinary approach to provide students essential knowledge to address evolving cyber security challenges. Students learn to identify cyber security risks and to work in teams to develop appropriate, user-friendly protection and response options. This interdisciplinary approach enables students to not only use existing approaches to solve cyber security threats but also to develop new
approaches, and in particular, approaches that are relevant to the cyber challenges facing small businesses.

**Accelerated BS/MS Program:** An accelerated BS-MS program enables our outstanding students to obtain a bachelor and a master’s degree in CSE in 5 years.

**Accelerated BS/MBA Program:** An accelerated BS-MBA program enables our outstanding students to obtain a bachelor degree in CSE and a master of business administration in 5 years.

### 1.3. Graduate Director and Contact Information

The CSE Graduate Director oversees all aspects of graduate education within the department. Some of the Graduate Director's activities include:

- Overseeing the admissions process; ensuring admission of highly qualified applicants; requesting and justifying admission of applicants not meeting certain university requirements.
- Graduate student recruitment and promotion of the graduate program.
- Reviewing and approving programs of study and the composition of advisory/examining committees;
- Reviewing and approving acceptance of transfer credits.
- Mediating in conflicts between graduate students and their advisor.

Contact Information of the CSE Graduate Director

Dr. Mehmet H Gunes
SEM 238
775-784-4313
grad_director@cse.unr.edu

### 2. MS Computer Science and Engineering

The Department of Computer Science and Engineering at the University of Nevada, Reno offers an integrated course of study covering the theory, implementation, and design of information, computing, and communication systems for those seeking the degree of master of science in computer science and engineering.

#### 2.1. Total Number of Credits Needed

Graduate students seeking the degree of master of science are given the opportunity to focus on a specific area in computer science and engineering and perform preliminary research through the “thesis” option (Plan A) or to study several different subjects in computer science and engineering through the “courses-only” option (Plan B). The credit requirements in each case are the following:

**2.1.1. Plan A: Thesis Option**

- This option requires a total of 31 credits and includes:
  - 24 course credits
  - 1 credit of graduate seminar
  - 6 thesis credits (CS 797)
- To comply with the Graduate School’s requirements, students must take:
o four 700-level courses
o four courses at either the 600 or 700 level.

- Additionally students must meet the following:
  o Theory core course requirement (see 2.2.1)
  o 1 credit of CS 792 Graduate Seminar (see 2.2.2)
  o Specialization area requirement: one course from two of the three research areas. (see 2.2.3)
  o 18 credits must be in computer science and engineering (CS/CPE). Non-CSE credits must be relevant to the CSE discipline (such as EBME, Math, IS).

- Course Electives
  o One independent study (CS 793 [A-Z]) of 3 credits is allowed. (see 2.2.4)
  o One internship study (CS/CPE694) of 3 credits is allowed. (see 2.2.5).
- Plan A students must assemble an advisory committee for their thesis.

### 2.1.2. Plan B: Courses-only Option
- This option requires a total of 33 course credits:
- To comply with the Graduate School’s requirements, students must take:
  o five 700-level courses and
  o six courses at the 600 or 700 level.
- Additionally students must meet the following:
  o Theory core course requirement (see 2.2.1)
  o Specialization area requirement: one course from each of the three research areas. (see 2.2.3)
  o Capstone requirement: One of the 700-level courses must include a graduate-level capstone project that integrates knowledge from your previous courses and demonstrates general mastery in the field.
- Course Electives
  o One independent study (CS 793 [A-Z]) of 3 credits is allowed. (see 2.2.4)
  o One internship study (CS/CPE694) of 3 credits is allowed. (see 2.2.5).
  o 24 credits must be in computer science and engineering (CS/CPE). Non-CSE credits must be relevant to the CSE discipline (such as EBME, Math, IS).
- Plan B students do not have to assemble an advisory committee.
- Plan B students are not eligible for teaching or research assistantships.

While it is not necessary for students to immediately decide which path to take, it is important that they meet frequently with their graduate advisor to focus their endeavors. Courses only students are typically advised by the graduate director.

### 2.2. Course Work
All course work must be completed within six years preceding the awarding of the degree. Students are expected to enroll at least 3 credits each fall and spring semester until graduation.

#### 2.2.1. Theory Core courses
In terms of specific coursework, students from both degree options must complete one of the following theory courses, if they have not already done so as undergraduates:
- CS 656 - Automata and formal Languages (3 credits)
- CS 677 - Analysis of Algorithms (3 credits)
- CS 763 - Computability and formal Languages (3 credits)
2.2.2. **Graduate Seminar**
Graduate students pursuing the “thesis” option (plan A) must complete one credit of CS 792 - graduate seminar. There is no graduate seminar requirement for the “courses only” option (plan B). The students are required to attend public talks at the CSE department to collect tokens as a measure of attendance. Each student must provide 12 tokens per credit to pass the course. To earn a token, the students must sign a specially designated attendance sheet that is going to be available only by the host of a public talk in the CSE department. The host will typically be a faculty member at the CSE department. The attendance sheet will NOT be available for signature once the talk starts. The students will also NOT be able to sign the attendance sheet after the talk. So, it is critical that the students arrive strictly before the talk starts; otherwise they will not be able to earn a token for that particular talk. Please follow specific colloquia or seminar announcements for exact time and place of the course. You should be able to receive these announcements from the departmental mailing lists. Please make sure your email address registered for these mailing lists is up to date. MS students should register for one credit of CS 792 in their final semester. Our administrative assistants will assign an S grade if the required 12 tokens are obtained by the end of the semester or an Incomplete grade, otherwise.

2.2.3. **Specialization Areas Requirement**
Graduate students pursuing the “thesis” option must take one course from at least two of the three specialization areas listed below. Graduate students pursuing the “courses-only” option must complete one course from at least three of the three specialization areas listed below.

1. Cybersecurity and Network Systems
2. Intelligent and Autonomous Systems
3. Software and Data Systems

A list of courses for each research area can be found in appendix A. The consent of the student's advisor and the graduate director are required for assigning the following courses in the appropriate categories above: CS 691, CPE 693, CS/CPE 694.

2.2.4. **Independent Study**
One independent study (CS 793 [A-Z]) of 3 credits is allowed for both MS options. Independent studies provide a way for students to learn specialized material or gain research experience. Typically a student and faculty member agree upon a topic for the student to research with guidance from the instructor for an agreed upon amount of credits.

2.2.5. **Internship**
Internships offer students industry experience. One internship (CS/CPE 694) of 3 credits is allowed for MS degree. Please follow the procedure for internships as specified on the internship webpage.

2.2.6. **Suggested Course Schedule**
This schedule is merely a suggestion and can vary depending on your advisor and course availability etc.

**Plan A (31 credits)**
1st semester: 6 credits of 600/700 level courses + 3 credits of 700 level courses
2nd semester: 6 credits of 600/700 level courses + 3 credits of 700 level courses
3rd semester: 3 credits CS 797 (thesis) + 3 credits of 700 level courses + 3 credits of CS 793 Independent Study
4th semester: 3 credits CS 797 (thesis) + 1 credit CS792 (you can collect tokens in preceding semesters)

Plan B (33 credits)
1st semester: 6 credits of 600/700 level courses + 3 credits of 700 level courses
2nd semester: 6 credits of 600/700 level courses + 3 credits of 700 level courses
3rd semester: 6 credits of 600/700 level courses + 3 credits of 700 level courses
4th semester: 6 credits of 700 level courses

2.3. Accelerated BS/MS Program
To enable students to earn both degrees in five years, the accelerated BS/MS program allows students to take up to nine credits of 600-level courses acceptable for their bachelor’s degree. Students typically apply and are admitted to accelerated programs at the end of their junior year and enroll in graduate credits during their senior year. These 600-level courses may also be applied to a master’s degree, provided the student passes each of these courses with a "B" or better. The 600-level courses that students select for this purpose must be approved by their undergraduate faculty advisor, graduate academic advisor, College of Engineering Advising Office, College of Engineering Dean’s Office and the Graduate School. Please follow the procedure and requirements specified on the Accelerated Programs webpage.

The College of Engineering requires all students participating in the accelerated program to maintain a GPA of 3.2 or higher in all courses to be applied to the master's degree. Students whose undergraduate and graduate GPA drops below 3.2 will be placed on academic probation for the accelerated program for one semester. If they raise their GPA to meet the standards above, they will be removed from probation and returned to good standing. If after one semester, students are not able to raise their GPA sufficiently, they will be removed from the accelerated program. Students who are removed from the accelerated program can continue to pursue a bachelor’s and master’s degree under the normal requirements.

2.4. Comprehensive Exam
There is no comprehensive exam for the MS degree.

2.5. Thesis
For the thesis option, a thesis involving original research in computer science and engineering completes the M.S. program. Students must register for six credits of CS 797 (thesis) either in the last semester or 3 credits in the semester that the student defends their thesis and 3 credits in the preceding semester. A defense must be held as a public oral examination, which is announced via posting and electronic mail at least one week in advance. The announcement must include the title and abstract of the work, the date, time and place of the exam, and the names of the student and of the committee chair.
3. PhD Computer Science and Engineering

The Department of Computer Science and Engineering at the University of Nevada, Reno offers an in-depth, cutting-edge curriculum for those graduates students seeking the degree of doctor of philosophy in computer science and engineering. Doctoral students are given the opportunity to focus on a specific area in computer science and engineering by taking advanced courses and becoming significantly involved in many aspects of original research, advancing scientific knowledge in their field of specialization.

3.1. Total Number of Credits Needed

The credit requirements for the doctoral program in computer science and engineering are:

- A PhD requires a total of 72 credits beyond a BS degree and includes:
  - 30 credits of 700-level courses.
  - 12 credits of 600/700 level courses.
  - 24 credits dissertation work (CPE 799)
- Students must take the following:
  - Meet the breadth course requirement (see 3.2.1)
  - 3 credits of Graduate Seminar (CS 792) (see 3.2.2)
  - 3 credits of Comprehensive Exam (CPE 795) (see 3.2.3)
- Course Electives:
  - Independent studies (CS 793 [A-Z]) of 6 credits are allowed. (see 2.2.4)
  - One internship study (CS/CPE 694) of 3 credits is allowed. (see 2.2.5).
  - 36 out of the 48 non dissertation credits (75%) must be in Computer Science and Engineering, i.e., must be credits with CS or CPE codes. Non-CSE credits must be relevant to the CSE discipline (EBME, Math, IS).

3.2. Course work

All course work must be completed within eight years preceding the awarding of the degree. Students are expected to enroll at least 3 credits each fall and spring semester until graduation. At most 9 credits can be of courses with S/U grading.

3.2.1. Breadth Requirement

All students must show that they have taken at least one course, at the 400- level or above, in four of the six areas listed below, earning at least a "B". Students lacking sufficient background in these areas must complete prescribed prerequisite courses within the first year.

Operating Systems
- CS 646 - Principles of Operating Systems (3 units)

Computer Networks
- CPE 600 - Computer Communication Networks (3 units)

Artificial Intelligence
- CS 682 - Artificial Intelligence (3 units)

Analysis of Algorithms
- CS 677 - Analysis of Algorithms (3 units)

Software Engineering
- CS 625 - Software Engineering (3 units)

Theory of Computing
- CS 656 - Automata and formal Languages (3 units)
3.2.2. Graduate Seminar
All doctoral students are required to attend public talks at the CSE department to collect tokens as a measure of attendance. Each student must provide 36 tokens for three credits to pass the course. To earn a token, the students must sign a specially designated attendance sheet that is going to be available only by the host of a public talk in the CSE department. The host will typically be a faculty member at the CSE department. The attendance sheet will NOT be available for signature once the talk starts. The students will also NOT be able to sign the attendance sheet after the talk. So, it is critical that the students arrive strictly before the talk starts; otherwise they will not be able to earn a token for that particular talk. Please follow specific colloquia or seminar announcements for exact time and place of the course. You should be able to receive these announcements from the departmental mailing lists. Please make sure your email address registered for these mailing lists is up to date. PhD students should register for three credits of CS 792 in their final semester but collect tokens in preceding semesters. Our administrative assistants will assign an S grade if the required 36 tokens are obtained by the end of the semester or an Incomplete grade, otherwise.

3.2.3. Comprehensive Exam
The student’s dissertation committee must be formed within a year of admission to the Ph.D. program. The committee will be responsible for:
- Program of study.
- Direction of student’s research.
- Directing the student towards the written and oral requirement of their comprehensive exam and advancement to candidacy.

Before candidates can receive their Ph.D. in computer science and engineering, they must pass the comprehensive exam by enrolling in CPE 795. The exam must be taken as soon as the student has completed or is expected to complete 42 graduate units of coursework in order to be admitted into candidacy. The comprehensive exam must be taken at least one semester before the dissertation defense. A student can take the exam up to two times. If he/she cannot pass the exam the second time, then the student will be dismissed from the PhD program. The exam has two requirements:

**Written Requirement:**
- Thorough review of the literature for the student's research area.
- Research proposal (goals, methodology, and research plan).
- Work in progress.

**Oral Requirement:**
- Public colloquium covering the written exam.
- Q&A by the student’s dissertation committee, covering the written exam.

The student’s dissertation committee will decide whether the student passes/fails the written and oral portions of the comprehensive exam.

According to UNR regulations, admission to candidacy confirms that a student has successfully completed the departmental course requirements and university residency requirements. In order to gain admission to candidacy, a student must meet all the following requirements:

1. Hold at least a “B” average in all graduate work.
2. Pass the comprehensive exam.
3. Gain the advisory/examining committees’ formal approval for the program of study, including dissertation development.

The [Doctoral Degree Admission to Candidacy form](#) needs to be submitted to the graduate school and the student’s advisory committee, graduate director of the program, and the Graduate Dean must approve the form.
3.3. Suggested Course Schedule
This schedule is merely a suggestion and can vary depending on your advisor and course availability etc.

1st semester: 3 credits of 600/700 level courses + 6 credits of 700 level courses
2nd semester: 3 credits of 600/700 level courses + 6 credits of 700 level courses

3rd semester: 3 credits of 600/700 level courses + 3 credits of 700 level courses + 3 credits of CS 793 Independent Study
4th semester: 3 credits of 600/700 level courses + 3 credits of 700 level courses + 3 credits of CS 793 Independent Study

5th semester: 6 credits of 700 level courses + 3 credits of CPE 795 (comprehensive exam)
6th semester: 9 credits of CPE 799 (dissertation)

7th semester: 9 credits of CPE 799 (dissertation)
8th semester: 6 credits of CPE 799 (dissertation) + 3 credits CS 792 (you should collect tokens in the preceding semesters)

3.4. Publication Requirement
PhD students are expected that by the time of their dissertation defense they have published in high quality venues and have at least 2 conference papers and 1 journal article. Further, it is recommended that all Ph.D. students are involved in writing grant applications under supervision of their advisors.

3.5. Dissertation Defense
A dissertation involving original research in computer science and engineering completes the Ph.D. program. A dissertation defense must be held as a public oral examination, which is announced via posting and electronic mail at least one week in advance. The announcement must include the title and abstract of the work, the date, time and place of the exam, and the names of the student and of the committee chair. A successful dissertation defense is reflected by no more than one negative vote from a member of the advisory/examining. If two negative votes are cast – regardless of the total number of committee members – the defense is unsuccessful. At the discretion of the committee, the candidate may be permitted one additional attempt to conduct a successful defense.

4. Transfer Credits
Graduate credits can be transferred from another institution. Credits completed at UNR in another program or as a graduate special do not need to be transferred. Transfer credit is requested on the Graduate Credit Transfer Evaluation Request form and must be signed by the student, major advisor, and the graduate director. Students must list each course for which they wish to receive transfer credit on the form. Only courses with a grade of "B" or better may be transferred.

4.1. MS Program
No more than nine (9) credits completed either prior to admission to the graduate program or transferred from another institution may be applied to the master's degree. Transfer credits applied
to the master’s program must comply with the time limitation on the master’s work (6 years). Thus, if a student took a course five years prior to the admission, they would have to complete the degree within one year for the course to apply to the degree.

### 4.2. PhD Program

Doctoral students may receive up to twenty-four (24) credits from a previously completed master’s program or other post BS degree program toward the Ph.D. degree. At most eighteen (18) credits could be transferred at 700 level. Transfer credits applied to the PhD program must comply with the time limitation on the PhD work (8 years). Credits from a completed master’s degree are exempt from the 8-year time limitation. All credits used to satisfy degree requirements for a graduate degree, except thesis and dissertation credits, may be acceptable for transfer.

### 5. Timeline for Degree Completion

- **Declaration of Advisor/Major Advisor/Committee Chair form**
  - For MS students, completed form must be submitted to the Graduate School by the end of the student’s second semester.
  - For PhD students, completed form must be submitted to the Graduate School by the end of the student’s third semester.

- **Program of Study form**
  - For master’s students, completed form must be submitted to the Graduate School by the end of the student’s third semester.
  - For PhD students, completed form must be submitted to the Graduate School by the end of the student’s fourth semester.

- **Doctoral Degree Admission to Candidacy form**
  - PhD students who completed all requirements except for the dissertation can submit doctoral candidacy.

- **Graduation Application form**
  - Students must apply to the Graduate School for graduation several weeks in advance (see 5.2)
    - May graduation deadline: March 1
    - August graduation deadline: June 1
    - December graduation deadline: October 1

- **Notice of completion form**
  - Master’s Notice of Completion form
  - Doctoral Notice of Completion form
  - Notice of completion should be submitted after all program requirements have been met.
  - See [website](#) for the exact deadline each semester

- **Exit Survey form**
  - Exit survey form should be submitted before graduation

### 5.1. Program of Study

A program of study describes the student’s specific plan of courses, research, and related activities. The graduate student’s advisor, the graduate director of the program, and the advisory committee determine the program of study for each degree candidate. This includes the dissertation, thesis, or
professional paper and the acceptable courses for completion of the degree. Only graduate courses are applicable toward the graduate degree (graduate courses are those with numbers in the 600 and 700 ranges). The approved Program of Study Requirements form, indicating the members of the advisory committee and the courses used to fulfill the degree requirements, must be filed with the Graduate School. The program of study must be approved by the graduate dean prior to the student applying for graduation. MS students that do a courses only option only have to list the graduate director as their advisor on their program of study (no advising committee is required). Changes to the program of study can be made using the Change in Program of Study form or the Change of Advisory form with approval from the graduate director. It is the responsibility of the student and the advisory committee to ensure that the graduate courses in the proposed program of study are consistent with the requirements of the Graduate School and the Computer Science and Engineering Department.

5.2. Applying for Graduation
Completing all the requirements for your degree may involve:
- Completing all course work and having final grades filed;
- Successfully completing your comprehensive examination;
- Defending your thesis or dissertation, making all necessary modifications and submitting the final work to the Graduate School; and
- Filing all outstanding paperwork (notice of completion, etc.).

After you’ve completed all requirements and submitted all necessary documents, you should check your transcript after the semester ends to ensure that grades have been received for all course work. If, for example, you take a course in your final semester that does not apply to your degree requirements and receive an “I – Incomplete” grade in that course, you will NOT be able to graduate: grades must be received for all course work regardless of whether or not the course applies to fulfilling degree requirements. If you’ve finished work for a previously received “I” grade, you should check your transcript to ensure that the instructor has actually filed a final grade for that course. There are cases where courses exceed the time limit for the degree or that grades received for particular courses do not meet minimum university standards (i.e. receiving a “C-” in a course). In these instances, the student must meet with their graduate director to explore corrective measures such as petitioning for an extension of the time limit or substituting an appropriate graduate course for another.

5.3. Commencement
Graduating doctoral students are accorded special recognition during commencement exercises by participating in a Hooding Ceremony. They receive their doctoral hoods from their faculty mentor and the dean of the Graduating School. To participate in this ceremony, students must have:
1. Filed an application for graduation for the appropriate semester (fall or spring); and
2. Successfully defended their dissertation and filed the Notice of Completion with the Graduate School at least one week prior to the commencement exercises.

Commencement exercises are held each December and May. Students who complete their degree during the summer session are eligible to attend either the fall or spring commencement exercises. There is a separate commencement ceremony held for advanced degrees conferred in May of each year. The December exercises are combined graduate/undergraduate ceremonies. Doctoral students are “hooded” by their academic advisors. Students and advisors process in and are seated together.
6. Committee Selection Guideline

The advisory committee approves the student's program of study and guides the students through his or her graduate program. The student should maintain close contact with his or her committee, keeping them informed of his or her progress and allowing them ample time to review drafts of the student’s thesis or dissertation. The students should be aware of their schedules when arranging committee meetings and thesis defense. Note that it is the student's responsibility to make these arrangements.

One of the members must be the graduate student's advisor, serving as the committee chair, and one must be from outside the Department of Computer Science and Engineering, serving as the Graduate School representative. The Graduate School representative member's role on the committee is not necessarily to provide subject-matter expertise but rather to ensure compliance with university policy and regulations; to serve as a representative of the graduate dean, “outside” the department granting the degree; and to provide an objective, non-partisan, independent perspective. Students may request the appointment of a committee member from the faculty of another university or from a relevant discipline or profession, provided the prospective member has achieved a record of distinction. Formal approval of the student's advisory committee is made by the graduate dean.

6.1. MS Thesis Advisory Committee

Courses only MS student do not need to assemble an advisory committee. For the thesis option, the committee should consist of at least 3 members, who must be members of the Graduate Faculty. The committee must be formed no later than at the end of 3rd semester.

6.2. PhD Dissertation Advisory Committee

The committee must be formed no later than end of 4th semester. The advisory committee of a doctoral student should consist of at least 5 members, who must all be members of the Graduate Faculty. Two or more members must be from the Computer Science and Engineering Department. For students going directly from the Bachelor's degree to the Ph.D. degree, the advisory committee should be formed prior to the completion of 24 credits in graduate courses. Students entering the Ph.D. program with a Master's degree should form the advisory committee during their first semester of enrollment.

7. Thesis/Dissertation Requirements

Graduate School forms and resources related to thesis and dissertations:

● MS Thesis Filing Guidelines
● Doctoral Dissertation Filing Guidelines
● Dissertation Title form

Once all requirements have been met, students need to submit a Final Review Approval form and Notice of Completion form in order to graduate.

● Final Review Approval – Obtain sign-off from advisory committee chair.
  ○ Master's Final Review Approval form
  ○ Doctoral Final Review Approval form
• Notice of completion – completed form should be submitted after all requirements have been met.
  o Master’s Notice of Completion form
  o Doctoral Notice of Completion form

8. Policies

8.1. Academic Status
All graduate students must maintain a cumulative graduate GPA of 3.0. If their GPA drops below 3.0 student is either placed on probation or dismissed. Undergraduate courses will not count towards the graduate GPA. Thesis, dissertation, S/U graded credits, and transfer credits have no impact on a student’s GPA. Each graduate course must be completed with a grade of “C” or better for the credit to be acceptable toward a graduate degree.

8.2. Probation
Students whose cumulative graduate GPA is between 2.99 and 2.31 are put on probation for one semester. If they fail to raise their cumulative GPA to 3.0 by the end of one semester, they are dismissed from their graduate program. Students placed on probation receive a letter from the Graduate School explaining exactly how many credits of "A" are required to raise their GPA to 3.0. S/U graded credits, thesis, dissertation, and transfer credits have no impact on a student’s GPA.

8.3. Dismissal
Students whose cumulative graduate GPA is 2.30 or lower are dismissed from graduate standing. Also, if the graduate GPA remains below 3.0 for two consecutive semesters the student is dismissed from graduate standing. Dismissed students are no longer in the graduate program but may take graduate-level courses as a Grad Special. Students wishing to complete their degree must obtain approval to take graduate-level courses, raise their graduate GPA to at least 3.0 and then re-apply to their graduate program. Any courses taken to raise their GPA will be included in the graduate special/transfer credit limitation (see 4).

8.4. Enrollment Limitations
In each fall and spring semester, graduate students may not enroll in more than sixteen (16) graduate credits. In summer sessions, graduate students may not enroll in more than six (6) graduate credits in any single summer session. In wintermester session, graduate students may not enroll in more than three (3) graduate credits. In each fall and spring semester they hold an assistantship, graduate assistants must enroll in at least six (6) and may not enroll in more than twelve (12) graduate credits.

8.5. Continuous Enrollment
All graduate students are required to maintain continuous enrollment of a minimum of three (3) graduate credits each fall and spring semester. International students may be required to enroll in nine (9) graduate credits each fall and spring semester depending on the requirements of their visa. There are no minimum registration requirements during the summer. All students holding assistantships (whether GTA or GRA) are required to enroll in a minimum of six (6) graduate credits each semester they hold the assistantship.
8.6. Leave of Absence
A leave of absence is a temporary cessation of study due to medical reasons or other emergencies during which time the students are not required to maintain continuous registration. Graduate students must register for a minimum of 3 graduate credits each fall and spring semester until graduation or have an Application for Leave of Absence form approved by the graduate director of the program and the Graduate School. Students requesting a leave of absence must be in good academic standing and submit a completed Application for a Leave of Absence form to the Graduate School before the period of leave begins. Students applying for a leave of absence should not have any “incomplete” grade which could be changed to “F” and have a detrimental impact on their cumulative grade point average. Usually leaves of absence are approved for one to two semesters and may be extended by the student filling an additional leave of absence form. Approved leaves of absence do not abrogate the time limitations on course work (6 years for a master’s degree program and 8 years for a doctoral program). That is, the clock doesn’t stop.

8.7. Reinstatement
Students can request reinstatement to their graduate program after an unapproved Leave of Absence by filing a Notice of Reinstatement to Graduate Standing form with their graduate program. Once completed, the program will return this form to the Graduate School for final approval. This form allows the program the option to recommend the student be readmitted to their graduate program based on their previous admission or require the student to re-apply for admission which would require him or her to submit a new application for admission and pay the application fee.

8.8. Getting an MS while Pursuing a PhD
If a student who is currently enrolled in the PhD program wants to earn an MS en route, then the student needs to complete a master’s degree program of study. The graduate director will then send a memo to the Graduate School informing them of this request and the student can then apply for MS graduation. For either option (thesis or non-thesis) students will only be able to use 24 credits of MS degree towards the PhD degree. If they take the thesis option, the 6 thesis credits cannot be used towards the dissertation credits.

8.9. Completing Two Degrees Simultaneously
Students may choose to complete two master’s degrees at the same time, or complete a master’s degree while working on a doctoral program in a different discipline. Students may not complete two doctoral programs simultaneously. When completing two master’s degrees at the same time, the student must apply and be accepted to each graduate program; must submit a separate program of study for each degree; must form two separate advisory committees with no more than one member in common; and have no more than 9 credits in common with each program of study.

8.10. Changing Advisors
It can happen that your research interests change over time or that the relationship with your current advisor has changed for the worse. Any student is free to change advisors, but changing earlier in your career is generally easier than later. If you are thinking about switching advisors, you can accomplish this the best if you adopt an attitude of respect for the person who initially advised you or recruited you to come to the university.

The following are general guidelines for switching advisors:
1. Talk to the graduate director. The graduate director represents the interests of the graduate students and s/he can help you make a better decision whether switching advisors would be
good for you. The graduate director can also try to mediate between you and your advisor and help you better understand the pros and cons of changing advisors. This advice is especially important if you are attempting to change advisors toward the final phase of your graduate program.

2. Decide whether you want to switch advisors (do not approach other faculty before deciding).

3. Decide whether you could work with two advisors.

4. Try to work through any differences with your current advisor. Express to your current advisor why you are considering a change, discuss whether his/her expectations of you are realistic, and whether they are open to adjusting.

5. Carefully consider the pros and cons of switching advisors as this may involve:
   a. You can lose your GRA or GTA position. Switching advisors is not a guarantee that you can maintain your assistantship.
   b. You need to find a new research topic as continuing your existing research with a new advisor is only acceptable with permission of your previous advisor.
   c. You may receive an unsatisfactory on thesis/dissertation credits that you are currently taking or a failing grade on an independent study with your current advisor if you do not complete your advisors’ expectation for that semester.
   d. If you are a PhD student and you have enough credits you may need to graduate with an MS degree on your old research topic before starting a new research topic with a new advisor.

6. After your decision, approach another faculty member about being an (co-) advisor for you.
   a. Frame your approach with positive information, such as new interests and new possibilities. Be professional at all times.
   b. Focus discussions on your interests and goals and not on negative incidents or difficulties.
   c. Avoid doing or saying anything that could have negative ramifications for your future career.

7. Notify your current advisor and discuss and arrange a timeframe for completing any remaining work with your current advisor before the switch takes place.

8. Arrange a meeting with your new and previous advisor to discuss your new topic of research and or overlap on publications in your thesis/dissertation.

9. Regarding intellectual property claims, carefully consider UNRs intellectual property policy.

10. Complete or update any formal paperwork that contains information about your advisor, e.g., advisory forms etc.

8.11. Academic Dishonesty

In order to maintain an academic climate conducive to each member’s success in the pursuit and transmission of knowledge, the University of Nevada, Reno has established a set of policies and standards for all of its members to adhere to. For student members of this community, enrollment at the university carries certain obligations related to activities in the academic setting, including behavior inside and outside the classroom. Specific details can be found on the Student code of Conduct website.

9. Graduate Assistantships

Graduate assistantship positions are offered through various departments and are paid by grants or State funds. Students interested in these positions must contact the department for specific
requirements. The Graduate School is responsible for approval of graduate assistantships after a department has requested the initiation of a contract. All positions are contingent upon available funding.

Graduate assistants perform a variety of duties from teaching undergraduate classes to grading papers, to conducting research in laboratories. Teaching assistants receive special teaching-skills training through the Excellence in Teaching Program.

All graduate students holding an assistantship (Graduate Teaching Assistant - GTA or Graduate Research Assistant - GRA) are considered Nevada residents for tuition purposes. Non-resident tuition is only waived for the duration of the assistantship. To be eligible for an assistantship, students must be admitted to a degree-granting program and be in good academic standing. The student must have an overall GPA of at least 3.0 and must be continuously enrolled in at least 6 graduate level credits (600-700) throughout the duration of the assistantship.

State-funded assistantships (GTA and GRA) may be held for a maximum of: three (3) years for master's degree students and five (5) years for doctoral degree students.

Please also refer to the most updated information on graduate assistantship in the graduate school website:
- General information about assistantships
- Graduate Assistantship handbook

### 9.1. Graduate Employment: Rights and Responsibilities

Graduate assistants play an invaluable role in the university's instruction and research endeavors. In their roles as graduate assistants, graduate students should be treated with respect as junior colleagues, and receive guidance in the performance of their duties as necessary. Graduate assistants are classified as professional employees, as such they do not work according to the clock, but rather, according to performance of a specified job. Graduate assistants work on average 20 hours per week for a 0.5 FTE employee.

#### 9.1.1. Rights

Graduate students have the right to fair and equitable treatment as employees (UNR general catalog - Affirmative Action/Equal Opportunity statement). Graduate Assistants have the right to discuss and clarify the conditions of their employment and expected workload with their supervisor. Graduate assistants have the right to expect the work requirements to be consistent with professional expectations. Consequently, graduate assistants should not be assigned, as part of their employment, inappropriate work tasks as house-sitting, babysitting, etc. for their supervisor.

#### 9.1.2. Responsibilities

As professional employees, graduate assistants should conduct themselves appropriately (dress, collegial relations, punctuality, dependability, etc.) in the work situation. As professional employees, graduate assistants will strive to fulfill the agreed upon work obligations. As professional employees, graduate assistants have the responsibility to report inappropriate work expectations or working conditions to the associate dean of the Graduate School and/or other appropriate campus entities.

### 9.2. Assistantships with the CSE Department

To inquire about a possible GRA, the student should contact CSE faculty members in the student's area(s) of research. Information on CSE faculty research is available on the department’s website.
10. Health Insurance
All domestic degree seeking graduate students, who are enrolled in six or more credits (regardless of the course level) in a semester, will be automatically enrolled and billed for the University sponsored health insurance for each term they are eligible (fall & spring/summer). If a student has other comparable coverage and would like to waive out of the student health insurance, it is the student’s responsibility to complete the University online waiver form prior to the deadline. If approved, a health insurance waiver is good for the current academic year only. A new waiver must be submitted each academic year. All international graduate students are required to carry student health insurance, and the cost will be automatically added to the student account. Any international graduate students with insurance questions must contact the Office of International Students and Scholars (OISS) directly. See also health insurance.

11. Graduate Student Association
The Graduate Student Association (GSA) represents all graduate students and promotes the welfare and interests of the graduate students at the University of Nevada, Reno. The GSA works closely with appropriate university administrative offices, including the Graduate School and Student Services and reports to the president of the University. The GSA government functions through the Council of Representatives, Executive Council, and established committees.

Graduate students have the right to form clubs and organizations within their programs, departments, colleges, ethnicities, shared interests, or any other constituencies, for the purposes of academic, professional, or social networking, sharing, and advocacy.

12. Acknowledgments
Parts of this handbook’s text have been taken and adapted from UNR’s Graduate Student’s Guide to University, the UNR Graduate School website, and the UNR Graduate Student Association website.
13. Appendix A: Specialization Area

Courses

13.1. Cybersecurity and Network Systems

- CPE 600 - Computer Communication Networks
- CPE 601 - Computer Network Systems
- CPE 606 - Real Time Computing Systems
- CPE 611 - Digital Computer Architecture and Design
- CS 642 - Cloud Computing
- CS 645 - Internet Security
- CS 646 - Principles of Operating Systems
- CS 647 - Computer Systems Administration
- CS 650 - Fundamentals of Integrated Computer Security
- CS 653 - Mobile Computing Security and Privacy
- CS 654 - Reliability and Security of Computing Systems
- CS 655 - Mobile Sensor Networks
- CS 691 - Topics: Architecture
- CS 691 - Topics: Computer Networks
- CS 691 - Topics: Fundamentals of Cryptography
- CS 691 - Topics: Social Networks
- CS 691 - Topics: Operating Systems
- CPE 701 - Internet Protocol Design
- CS 731 - Advanced Switching Theory
- CS 746A - Advanced Operating Systems
- CS 746B - Advanced Operating Systems
- CS 765 - Complex Networks
- CS 790BR - Seminar: Architecture
- CS 790GR - Seminar: Computer Networks
- CS 790U - Seminar
- CS 791 - Topics: Architecture
- CS 791 - Topics: Computer Networks
- CS 791 - Topics: High Performance Systems and Networking
- CS 791 - Topics: Mobile Security
- CS 791 - Topics: Operating Systems
13.2. Intelligent and Autonomous Systems

- CS 666 - Numerical Methods I
- CS 667 - Numerical Methods II
- CPE 670 - Autonomous Mobile Robots
- CPE 671 - Advanced Robotics
- CS 674 - Image Processing and Interpretation
- CS 679 - Pattern Recognition
- CPE 681 - Embedded Games Development
- CS 681 - Advanced Computer Game Design
- CS 682 - Artificial Intelligence
- CS 683 - Artificial Intelligence Programming
- CS 685 - Computer Vision
- CS 691 - Topics: Autonomous Mobile Robot Design
- CS 691 - Topics: Biomedical Computing
- CS 691 - Topics: Computer Science
- CS 691 - Topics: Fuzzy Logic
- CS 691 - Topics: Genetic Algorithms
- CS 691 - Topics: Introduction to Aerial Robotics
- CS 691 - Topics: Machine Learning
- CS 691 - Topics: Neural Networks
- CS 691 - Topics: Robotics
- CS 773A - Machine Intelligence
- CS 773B - Machine Intelligence
- CS 773C - Machine Intelligence
- CS 776 - Evolutionary Computing
- CS 786 - Advanced Computer Vision
- CS 790CR - Seminar: Biomedical Computing
- CS 790ER - Seminar: Computational Science
- CS 790JR - Seminar: Fuzzy Logic
- CS 790KR - Seminar: Genetic Algorithms
- CS 790QR - Seminar: Machine Learning
- CS 790RR - Seminar: Modeling and Simulation
- CS 790U - Seminar: Robotics
- CS 790X - Seminar: Robotics
- CS 791 - Topics: Robotics for Humanity
- CS 791 - Topics: Robot Manipulators
13.3. Software and Data Systems

- CS 615 - Parallel Computing
- CS 620 - Human-Computer Interaction
- CS 625 - Software Engineering
- CS 631 - Introduction to Big Data
- CS 633 - Data Intensive Computing
- CS 636 - Big Data Systems
- CS 657 - Database Management Systems
- CS 658 - Introduction to Data Mining
- CS 660 - Compiler Construction
- CS 680 - Computer Graphics
- CS 691 - Topics: Advanced Graphics
- CS 691 - Topics: Big Data Systems
- CS 691 - Topics: Compilers
- CS 691 - Topics: Convex Optimization and Engineering Applications
- CS 691 - Topics: Data Intensive Computing
- CS 691 - Topics: Data Mining
- CS 691 - Topics: Database Systems
- CS 691 - Topics: Human-Computer Interaction
- CS 691 - Topics: Introduction to Bioinformatics
- CS 691 - Topics: Parallel Computing
- CS 691 - Topics: Programming Languages
- CS 691 - Topics: Scientific Visualization
- CS 691 - Topics: Simulation & Performance Evaluation
- CS 691 - Topics: Software Engineering
- CS 691 - Topics: Ubiquitous Computing
- CS 709 - Topics: Advanced Software Project Management and Development
- CS 723 - Compilers and Translators
- CS 732 - Theory of Parallel and Distributed Processing
- CS 790AR - Seminar: Advanced Graphics
- CS 790CR - Seminar: Biomedical Computing
- CS 790DR - Seminar: Compilers
- CS 790ER - Seminar: Computational Science
- CS 790FR - Seminar: Computer Aided Design
- CS 790HR - Seminar: Database Systems
- CS 790MR - Seminar: Human-Computer Interaction
- CS 790NR - Seminar: Knowledge-Based Systems
- CS 790PR - Seminar: Logic Foundations
- CS 790S - Seminar: Parallel Computing
- CS 790T - Seminar: Programming Languages
- CS 790V - Seminar: Scientific Visualization
- CS 790Y - Seminar: Scientific Visualization
- CS 790W - Seminar: Software Engineering
- CS 790Z - Seminar: Software Engineering
- CS 791 - Topics: Advanced Graphics
- CS 791 - Topics: Compilers
- CS 791 - Topics: Database Systems
• CS 791 - Topics: Human-Computer Interaction
• CS 791 - Topics: Parallel Computing
• CS 791 - Topics: Programming Languages
• CS 791 - Topics: Scientific Visualization
• CS 791 - Topics: Software Engineering
• CS 723 - Compilers and Translators