

CS - 390^R - Software Engineering Fundamentals

22. 2017-2018 UG New Omnibus Course

General Catalog Information

Tracking: **NLAS1617-37**

Department*

Mathematical and Computer Sciences, Department of

Status:* Active-Visible

Prefix:*

CS

Course 390^R
Number:*

Course Type:*

Computer Science

Course Title:* Software Engineering Fundamentals

Transcript Course Title:* Software Engr Fundamentals

Equivalent/
Crosslisted? Equivalent Crosslisted

List all
equivalent
courses:

List all
crosslisted
courses:

Check All That Apply:* Required for Major
 Required for Minor
 Required for Concentration
 Specified Elective
 Elective
 Omnibus Course

Credit Hours:* 4

Schedule Type:*

Lecture

Grade Mode:*

Letter

Lecture: **4 60**

Lab:

Internship:

Practicum:

Other:

Additional Student Work Hours per course: 120

Variable topics umbrella course:* No Yes

If yes, number of credits/ repeats allowed

Specified repeatable course:* No Yes

If yes, number of credits/ repeats allowed

Prerequisite(s): CS2050 with grade of "C" or better

Corequisite(s):

Prerequisite(s) and/or Corequisite(s):

Banner Prerequisite(s): ~~CS2050~~ CS 2050-- Grade C

Banner Corequisite(s):

Banner

Prerequisite(s) and/or Corequisite(s):	
Level	Class
Program/Major	Student attribute
Catalog Course Description:*	<p>This course introduces the enterprise of software engineering and establishes a foundation for further study and practice in the software engineering domain. Topics and concepts introduced in this course include: Software Development Life Cycles (SDLC) and SDLC Models; Object-Oriented Analysis, Design, and Programming; Design Patterns; Test-Driven Development; Code Quality Assessment using both Static and Dynamic Analyses; Principled Debugging; Source Code Management with Revision Control; Automated Build Management; and Software Development Teams. Students will participate in software development experiences to reinforce acquired knowledge of the techniques and tools introduced in the course.</p>
Required Reading and Other Materials will be equivalent to:	<p><i>Essentials of Software Engineering, Third Edition</i> by Frank F. Tsui, et al. Jones & Bartlett (2013); ISBN 9781449691998</p> <p><i>Pragmatic Unit Testing in Java 8 with JUnit</i> by Jeff Langr, et al. Pragmatic Bookshelf (2015); ISBN 1941222595</p> <p><i>Version Control with Subversion</i> by B. Collins-Sussman, et al. svnbook.org (2016); Available Online http://svnbook.org</p> <p><i>Debug It! Find, Repair, and Prevent Bugs in Your Code</i> by Paul Butcher Pragmatic Bookshelf (2009); ISBN 193435628X</p>
Specific, Measurable Student Behavioral Learning Objectives:	<p>Articulate fundamental software engineering principles and techniques</p> <p>Utilize basic software engineering techniques and tools</p> <p>Apply software engineering practices associated with source code management, build configuration, and testing</p> <p>Selectively employ appropriate computer-aided software engineering tools including static analyzers, test frameworks, and debuggers</p> <p>Evaluate software quality using established metrics</p>
Detailed Outline of Course Content (Major Topics and Subtopics) or Outline of Field Experience/ Internship	<p>Software Development Life Cycle (SDLC) and SDLC Models</p> <p>Software Development Teams</p> <p>Object-Oriented Analysis, Design (including Design Patterns), and Programming</p> <p>Source Code Management & Revision Control</p> <p>Code Quality Assessment (Static & Dynamic Analysis)</p> <p>Test-Driven Development</p> <p>Principled Debugging</p> <p>Automated Build Management</p>

**Evaluation of
Student
Performance**


- Homework Assignments
- Projects
- Presentations
- Examinations

Written communication skills will be applied in this course.


**Distribution of
Credit Hours**

4(4+0+0)


Steps for CS - 390 - Software Engineering Fundamentals

Originator		<i>Status: Approved</i>
Participants  Jody Paul 9/14/2016 5:00 PM	Activity Required for Approval: <i>100% required</i> Date Completed: <i>9/14/2016 5:00 PM</i> Changes: <i>No</i> Comments: <i>No</i>	




Department Curriculum Committee Chair		<i>Status: Approved</i>
Participants  Clark Dollard 9/27/2016 3:53 PM	Activity Required for Approval: <i>100% required</i> Date Completed: <i>9/27/2016 3:53 PM</i> Changes: <i>No</i> Comments: <i>No</i>	




Department Chair		<i>Status: Approved</i>
Participants  Lindsay Packer 9/28/2016 8:11 AM	Activity Required for Approval: <i>100% required</i> Date Completed: <i>9/28/2016 8:11 AM</i> Changes: <i>Yes</i> Comments: <i>No</i>	




Dean's Office Tracking Assignment		<i>Status: Restarted</i>
Participants Linda Lang-Peralta Cynthia Philbrook  Erica Buckland (System Administrator) 9/28/2016 2:26 PM	Activity Required for Approval: <i>100% required</i> Date Completed: <i>9/28/2016 2:26 PM</i> Changes: <i>No</i> Comments: <i>No</i>	



Dean's Office Tracking Assignment		<i>Status: Approved</i>

Participants	Activity
 Cynthia Philbrook 9/29/2016 3:45 PM	Required for Approval: <i>100% required</i> Date Completed: <i>9/29/2016 3:45 PM</i> Changes: Yes Comments: Yes



Associate Dean	Status: <i>Approved</i>
Participants	Activity
 Linda Lang-Peralta 9/29/2016 5:50 PM	Required for Approval: <i>100% required</i> Date Completed: <i>9/29/2016 5:50 PM</i> Changes: No Comments: Yes

Attachments for CS - 390R - Software Engineering Fundamentals

This proposal does not have any attachments.

Comments for CS - 390_R - Software Engineering Fundamentals

Curriculog	9/29/2016 5:50 pm
This proposal has been completed.	
Linda Lang-Peralta	9/29/2016 5:50 pm
Approved with the understanding from the course number that this is an Omnibus course, even though that label is not checked. Please check number.	
Curriculog	9/29/2016 5:50 pm
Linda Lang-Peralta has approved this proposal on Associate Dean.	
Cynthia Philbrook	9/29/2016 3:45 pm
Tracking Number Added	
Curriculog	9/29/2016 3:45 pm
Cynthia Philbrook has approved this proposal on Dean's Office Tracking Assignment.	
Curriculog	9/28/2016 2:26 pm
System Administrator Erica Buckland has restarted the Dean's Office Tracking Assignment step as a result of participants being added to or removed from the step.	
Curriculog	9/28/2016 1:24 pm
Linda Lang-Peralta was added to the CLAS Dean's Tracking Designee role.	
Curriculog	9/28/2016 8:11 am
Lindsay Packer has approved this proposal on Department Chair.	
Curriculog	9/27/2016 3:53 pm
Clark Dollard has approved this proposal on Department Curriculum Committee Chair.	
Curriculog	9/14/2016 5:00 pm
Jody Paul has approved this proposal on Originator.	
Curriculog	9/12/2016 9:06 pm
Jody Paul has launched this proposal.	

Crosslistings for CS - 390_ - Software Engineering Fundamentals

CS - 390~~R~~- Software Engineering Fundamentals (parent proposal)

This proposal does not have any active crosslisted proposals.

Decision Summary for CS - 390R - Software Engineering Fundamentals

This proposal is complete. No more decisions may be made at this time.