

COMPUTER INTEGRATED SURGERY (CIS) MINOR

Information and Checklist

Name of Student _____	Date _____
JHU Email _____	Phone _____
Major(s) _____	Minor(s) _____
Expected Graduation Date _____	

Course Selection and Minor Requirements

For up-to-date information on CIS Minor requirements, please visit

<https://www.lcsr.jhu.edu/Education/Undergraduate/CISminor>

How to Declare a Minor in CIS

1. All students interested in the CIS Minor are required to make an appointment to speak with a CIS minor advisor to receive guidance about the program. Please see the above website to obtain a list of CIS minor advisors.
2. Complete two copies of this CIS Minor Checklist and meet periodically (at least once per year) with your minor advisor. After meeting with your advisor, take a signed copy of the checklist to Alison Morrow (200 Hackerman Hall) and keep one for your own records.
3. Complete the Addition/Change of Minor and/or Minor Advisor form in the registrar's office
4. During your senior year, you must also note the CIS Minor on your *Application for Graduation*.
5. When all requirements have been completed (or are in progress), bring two copies of the completed form to the CIS Minor Program Coordinator (Dr. Russell Taylor) for review and signature.

CIS Minor Checklist

I Required Fundamental Computer Science Courses

	Course	Semester completed or will be completed
<input type="checkbox"/>	Intro Programming in Java (601.107) or Gateway Computing: AVA (500.112)	
<input type="checkbox"/>	Data Structures (601.226)	
<input type="checkbox"/>	Equivalent experience determined by your advisor. Please specify course completed:- Course Name:- Course Number:-	

II Required Fundamental Mathematics Courses

	Course	Semester completed or will be completed
<input type="checkbox"/>	Calculus I (110.106 or 110.108)	
<input type="checkbox"/>	Calculus II (110.107 or 110.109)	
<input type="checkbox"/>	Calculus III (110.202 or 110.211)	
<input type="checkbox"/>	Linear Algebra (553.291, 110.201, or 110.211-12)	

Visit the following webpage for up to date course listings <http://lcsr.jhu.edu/computer-integrated-surgery-minor/>

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III A Required Fundamental CIS Courses

	Course	Semester completed or will be completed
<input type="checkbox"/>	Computer Integrated Surgery I (601.455)	
<input type="checkbox"/>	Computer Integrated Surgery II (601.456)	
<input type="checkbox"/>	OR Design course in BME, ECE, or ME with substantial CIS content approved by the student's CIS minor advisor. Specify course completed:	
<input type="checkbox"/>	ONE Course in Imaging	
<input type="checkbox"/>	Computer Vision (601.461)	
<input type="checkbox"/>	Image Processing and Analysis I (520.414)	
<input type="checkbox"/>	Medical Imaging Systems (520.432 or 580.472)	
<input type="checkbox"/>	Medical Image Analysis (520.433)	
<input type="checkbox"/>	Vision as Bayesian Inferences (601.783)	
<input type="checkbox"/>	OR ONE Course in Robotics	
<input type="checkbox"/>	Robotic Sensors and Actuators (530.420)	
<input type="checkbox"/>	Mechatronics (530.421)	
<input type="checkbox"/>	Robotic Devices, Kinematics, Dynamics and Control (530.646)	
<input type="checkbox"/>	Applied Optimal Control (530.603) with CIS project approved by CIS Minor advisor	
<input type="checkbox"/>	Robot Devices, Kinematics, Dynamics, and Control (530.646)	
<input type="checkbox"/>	Algorithms for Sensor Based Robotics (601.463)	

III B Required THREE Other Upper Level Courses related to CIS

	Course	Semester completed or will be completed
<input type="checkbox"/>	Computer Vision (601.461)	
<input type="checkbox"/>	Image Processing and Analysis (520.414)	
<input type="checkbox"/>	Robotic Devices, Kinematics, Dynamics and Control (530.646)	
<input type="checkbox"/>	Mechatronics (530.421)	
<input type="checkbox"/>	Intro to Biomechanics (530.445)	
<input type="checkbox"/>	Electronics Design Lab (520.448)	
<input type="checkbox"/>	Medical Imaging Systems (520.432/580.472)	
<input type="checkbox"/>	Principles of the Design of Biomedical Instrumentation (580.471)	
<input type="checkbox"/>	Robot Sensors and Actuators (530.420)	
<input type="checkbox"/>	Medical Image Analysis (520.433)	
<input type="checkbox"/>	Application of Augmented Reality (601.453)	
<input type="checkbox"/>	Algorithms for Sensor Based Robotics (601.463)	
<input type="checkbox"/>	Applied Optimal Control (530.603 with CIS project approved by CIS Advisor)	
<input type="checkbox"/>	Augmented Reality (601.454)	
<input type="checkbox"/>	Equivalent course determined by your advisor	

	Optional Courses that can be counted towards Upper Level Courses based on approval of advisor	Semester completed or will be completed
<input type="checkbox"/>	Machine Learning: Deep Learning (601.482)	
<input type="checkbox"/>	Machine Learning: Data to Models (with CIS Project) (601.476)	

STUDENT'S STATEMENT

I have reviewed my progress toward meeting the graduation requirements for the CIS Minor. I understand which requirements have been completed and which remain to be completed, including those in progress.

Student's Signature

Date

CIS Minor Advisor's Signature - **FINAL APPROVAL**
(To be signed only on completion of ALL requirements)

Date

CIS Minor Coordinator- Prof. Russell Taylor

Date