

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"/>	500.112 Gateway Computing: JAVA or 500.113 Gateway Computing: Python or 500.114 Gateway Computing: Matlab	
<input type="checkbox"/>	601.226 Data Structures	
<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"/>	110.106 or 110.108 Calculus I	
<input type="checkbox"/>	110.107 or 110.109 Calculus II	
<input type="checkbox"/>	110.202 or 110.211 Calculus III	
<input type="checkbox"/>	553.291, 110.201, or 110.211-12 Linear Algebra	

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"/>	601.455 Computer Integrated Surgery I	
<input type="checkbox"/>	601.456 Computer Integrated Surgery II	
<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:	
	ONE Course in Imaging	
<input type="checkbox"/>	601.461 Computer Vision	
<input type="checkbox"/>	520.414 Image Processing and Analysis I	
<input type="checkbox"/>	520.435 or 580.472 Medical Imaging Systems	
<input type="checkbox"/>	520.433 Medical Image Analysis	
<input type="checkbox"/>	601.783 Vision as Bayesian Inferences	
	OR ONE Course in Robotics	
<input type="checkbox"/>	530.420 Robotic Sensors and Actuators	
<input type="checkbox"/>	530.421 Mechatronics	
<input type="checkbox"/>	530.646 Robotic Devices, Kinematics, Dynamics and Control	
<input type="checkbox"/>	530.603 Applied Optimal Control with CIS project approved by CIS Minor advisor	
<input type="checkbox"/>	530.646 Robot Devices, Kinematics, Dynamics, and Control	
<input type="checkbox"/>	601.463 Algorithms for Sensor Based Robotics	

III B Required THREE Other Upper Level Courses related to CIS

	Course	Semester completed or will be completed
<input type="checkbox"/>	601.461 Computer Vision	
<input type="checkbox"/>	520.414 Image Processing and Analysis	
<input type="checkbox"/>	530.646 Robotic Devices, Kinematics, Dynamics and Control	
<input type="checkbox"/>	530.421 Mechatronics	
<input type="checkbox"/>	530.445 Intro to Biomechanics	
<input type="checkbox"/>	520.448 Electronics Design Lab	
<input type="checkbox"/>	520.432/580.472 Medical Imaging Systems	
<input type="checkbox"/>	580.471 Principles of the Design of Biomedical Instrumentation	
<input type="checkbox"/>	530.420 Robot Sensors and Actuators	
<input type="checkbox"/>	520.433 Medical Image Analysis	
<input type="checkbox"/>	530.421 Application of Augmented Reality	
<input type="checkbox"/>	530.421 Algorithms for Sensor Based Robotics	
<input type="checkbox"/>	530.421 Applied Optimal Control with CIS project approved by CIS Advisor	
<input type="checkbox"/>	530.421 Augmented Reality	
<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"/>	82306: 4' Machine Learning: Deep Learning	
<input type="checkbox"/>	530.421 Machine Learning: Data to Models	

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