APPLICATION FOR ADMISSION

B.S., Interdisciplinary Self-Design Ma College of Humanities and Social Science Interdisciplinary Studies North Carolina State University)
☐ Check this box if applying to <i>change</i>	your major to IDS-BS.	
☑ Check this box if applying to add ID	S-BS as one of two or more	majors.
Name of applicant:		
Student ID Number	Phone number:	(May)
E-mail address:		
Mailing address:	2.00	20.00
Present curriculum	Clas	25. A MO
Proposed title of IDS concentration	acide area yazin di k	Superior Design
Name of IDS degree advisor	10010	2 02
Advisor's campus address:		Box #:
Advisor's phone E-Ma	il address	12.07.28N
Signature of applicant:		Date
Signature of advisor:		Date:
Printed name of advisor:		- ¥
Check one of the following if you are in o		

Required application materials:

- A list of concentration courses (30 hours).
- An essay describing your learning goals and the connections between the courses and the goals.
- A copy of your latest degree audit
- A copy of your complete informal transcript.
- A proposed semester-by-semester plan of study, giving both course numbers and course titles.

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Applicant's name		
Concentration title:	Influence and Impacts of Agriculture and Food Systems	

I. Concentration Courses [IDS 490 (3.0 hrs.) + 24 hours = 27 total credit hours]

Number	Title	Hours	Grade*
ARE 495	Societal and Global Issues in Agribusiness and Farming	3 4.	<u> </u>
GG 3045	Food Geography (offered at University Cork College)	3	<u>IP</u>
STS 323	World Populations and Food Prospects	3	Spring 2019
ARE 433	U.S. Agricultural Policy	3	Fall 2019
HI 360	U.S. Agricultural History (US Diversity requirement)	3	Spring 2018
SOC 350	Food and Society	3	Spring 2019
HI 481	History of Life Science	3	Spring 2018
FE 2201	International Food Policy (offered at University Cork College	<u>a) 3</u>	IP
_IDS 490	Interdisciplinary Methods and Issues	3.0	Fall 2019

^{*}If you are currently enrolled in the course, put IP (In Progress) in this column. If you have not taken and are not now taking the course, leave this line blank.

ADDITIONAL COURSE: FE2203 Food Economics (offered at University College Cork) 3.0 credits IP

II. CHASS Basic Requirements Worksheet

Students are responsible for selecting the courses designated by the CHASS faculty for meeting these requirements. The document, "Keypoints," should be consulted carefully to be sure that the courses you want to select have, in fact, been designated for each of the requirements listed below. While the concentration courses listed above cannot be changed without written approval, you can make changes in the courses for CHASS Basic Requirements as long as they conform to the requirements in "Keypoints." Please keep in mind also that the Committee's approval of your major does not constitute approval of your selection of courses to meet the CHASS Basic Requirements. "Keypoints" is online at:

http://chass.ncsu.edu/documents/keypoints_current.pdf.

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You MUST put a course number on every line below. If you have not yet taken the course, leave a blank in the "Grade" column. If you are now taking the course, put "IP" in the grade column.

	HUMANITIES AND SOCIAL SCIENCES	Course	Hours	Grade
	ENG 101 Academic Writing and Research	ENG 101	4	CR
	History: one course. Consult "Keypoints"	HI 233	3	CR
	Literature: one course. Consult "Keypoints"	FL2111	_3	<u>IP</u>
	***Aspects of Irish Folklore (to be taken at UCC for credit as T Philosophy: Consult "Keypoints"	PHI 340	3	IP
	Writing and Communication: one course. Consult "Keypoi	nts" ENG 331	3	<u>Fall 20</u> 18
	Arts & Letters: 3 credit hours. Consult "Keypoints"	ENG 282	3	<u>A</u>
	Social Sciences: 9 credit hours from at least three Disciplines: Consult "Keypoints"	PS 201 PSY 200 ARE 201	3 3 3	CR CR B
	Basic Science Three Different Sciences/4 hrs. each: Consult "Keypoints"	CH 101/102 PY 205/206 BIO 181	3/1	B-/A+ B/A+ Spring 2018
	Science Elective: Consult "Keypoints"	OY 212 CH 221/222	34	B/B B
	Mathematics Calculus Math Electives: 6 hrs., Consult "Keypoints"	MA 141 MA 241 MA 242	4 4	CR CR B
	Advanced Sciences/Technology Option 15 hrs. (See Advisor)			
*BAE -	Engineering Courses (see additional page for specific courses)			

DEPARTMENTAL REQUIREMENTS

IDS 490 (3 hr.) Major courses (24 hrs.) Listed on previous page 27 total credit hours

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	VES (Total hr. 17; 12 hr. S/U limit)			
Course number	Course title		Hours	Grade
E 101	Introduction to Enginering		1	
E 115	Introduction to Computing Environmen	nts		S
MB 351	General Microbiology		3	Fall 2019
STS 301	Science and Civilization		3	Fall 2019
ARE 304	Agribusiness Management	76-44-W	3	Summer 2017
MAE 201	Engineering Thermodynamics		3	IP
STS 214	Intro to Science, Technology, and So	ciety	3	Summer 2018
III. GEP COUR	RSES			
PE and Healthy I	Living: 2 credits. Consult "Keypoints"	HESF 111	_1	S
		HESO 278	1	S
	Breadth: Consult "Keypoints" - ciences/Natural Sciences/Engineering	SSC 200	3	В
Interdisciplinary	Perspectives: Consult "Keypoints"	El 201	3	
		ARE 336	3	A
GEP US Diversit GEP Global Kno Foreign Languag	wledge	Coreq. HI 360 Coreq. Study Al	oroad	

Total Hours Required: 122.00 hrs.

IV. Approval

Program Director, Interdisciplinary Self-Design Major
Attached: College Approval for the Advanced Science/Technology Option

Date

ADVANCED SCIENCE/TECHNOLOGY REQUIREMENT FOR B.S DEGREES

A 15-hour concentration in ONE area of science, technology, or mathematics is required. A minimum GPA of 2.0 is required in this group of courses. Approval of the selected courses will be indicated by the signature of the student, his/her adviser, the department's B.S. program coordinator (if different from the adviser) and the CHASS Associate/Assistant Dean.

Student's Name Pr	inted:	
Student's Identifica	ation Number	
* Courses for a pro adviser and should at least one course in a Thematic Focu Submissions contain	is being met by: Second Major Minor posed Thematic Focus should be selected in consultation demonstrate coherence and progression in the area of stu will be at the 300-level or higher. The following courses as: BIO < 181, CH 100, MA < 114, MEA 100, PY < 201, ining a Thematic Focus that consists of courses with more empanied by a statement from the student providing a justiquirement.	ady. It is expected that should not be included, or ST < 300.
Name of Second M	lajor, Minor, or Thematic Focus: <u>Agricultural Engineering</u>	ng
**Course number	Course title	Hours Grade
BAE 202	Introduction to Biological and Agricultural Engineering Met	hods 4
BAE 322	Introduction to Food Process Engineering	3
BAE 325	Introductory Geomatics	3
BAE 200	Computer Methods in Biological Engineering	2
BAE 425	Industrial Microbiology and Bioprocessing	
Requirement and as	Date Of double count courses towards the Advanced Science, ny other requirement. Courses on this list will be moved y Requirement section of your degree audit upon Dean's	to the Advanced
Approval:		
Student's Advisor:	Date	1-24-57)
B.S. Program Advis (If different from A		
Associate/Assistant	Dean? Date	45/2

Description of Concentration: Essay

I initially came to NC Sate with the mindset of getting my engineering degree and finding the best job available. That plan made sense to me because it was simply what smart kids at my high school did. After arriving as an undecided engineering student, I quickly found a home in Weaver Labs with the BAE department. Biological and Agricultural engineering sounded perfect to me. I have always had a special interest in agriculture from spending my summers with my grandparents on their small farm in Indiana; and my AP Biology teacher in high school was the greatest mentor and role model a student could ask for. Choosing an engineering department that combined my interests and strengths seemed like a good, and the plan still made sense. However, I had so many credits from high school that I realized I would need to add classes in order to meet my Park Scholarship requirement of 15 credits per semester.

I started thinking about minors to fill in the extra credits. It made sense to add a business or economics minor, because that is what most engineers get minors in to make them more marketable for a job. However, unlike most engineers, I felt drawn towards the agricultural the head of that minor and business management (ABM) minor. I met with the we began to talk about what the Agricultural and Resource Economics (ARE) department and showed me what some ARE the minor and department could offer me as an engine classes studied and I was surprised that some classes were talking about resource security, ironmental impacts, and public policy issues. I was sold quite quickly on an ABM minor, but in the CALS Career Services office. During my meeting with referred me to new interest in agricultural policy that I was becoming very I mentioned dropped the name "Thomas Jefferson Scholars". From there I passionate about and One thing led to another and I became one of, if not the went on to speak wit only, Thomas Jefferson Scholar to join after already completing a semester at NC State.

As a Thomas Jefferson Scholar, I had to start looking for a second major in the College of Humanities and Social Sciences. Initially I thought Political Science would give me an opportunity to study agricultural public policy, but the suggested something called a "self-design Interdisciplinary Studies degree". Throughout the past spring and summer, I began planning my own degree based around my interests in agriculture and its social implications. I met with various faculty and mentors who have helped me define my interests and educational goals, as well as post graduate goals.

Through much contemplation, I came to decide that I wanted a degree, which combined with my engineering degree, would allow me to help people in the area of food security. In my opinion, I can best achieve this goal with a deeper understanding of the environmental, economic, and social impacts of agriculture. The agriculture industry makes extraordinary impacts on our environment and natural resources; yet, these resources are essential to the continued growth of

our food systems and protecting our food starts with protecting our environment. Economics drives markets and decision making. Therefore, I decided it was important to study the underlying forces that determine production and prices of food. Food is at the core of human society and has been since the beginning of history. As methods of food production have changed, people's access to food has changed too in ways that have altered certain aspects of our society. The ultimate goal of food security depends heavily on being able to identify the impacts of food production on public access to food. These three focus groups could also be supplemented with learning about the sociology of food and community-based studies on food insecurity within my own local area, which can be achieved through the capstone-style project in IDS 490.

Sometimes I find it hard to believe that my ideas for this radical new major all stemmed from those precious moments on my grandparents' humble farm in couthern Indiana. However, I owe a great deal of thanks to many inspiring faculty members like who have cultivated a simple past-time into a clear goal for the future.

Concentration Course Descriptions, Justifications and Timeline



Concentration Title: Influence and Impacts of Agriculture and Food Systems

Description: The World Bank has stated that food production must double in order to meet the demand of a population of over 9 billion by 2050. However, the world currently produces enough food to feed 7 million people (current population). Yet, it is estimated that 1 in 9 people will suffer from under nourishment in the next year, another 1 in 9 will be overweight and obese, and 30% of food produced will be wasted. It is obvious that the world's food system is suffering from severe inefficiencies and the engineer within me wants to help the global food system strive towards its true potential, a world without starvation. With increasingly strained natural resources and the unpredictability of future climates, the goal of an efficient food system will become more difficult without immediate change. I hope that the educational experience I will get from this degree will enable me to a be a change maker in the global food system and help create a system that is sustainable, resilient, and just.

ARE 495 Social Issues of Agribusiness and Farming (Fall 2016)

Description: This course will examine current and impending societal and global issues facing farmers, agribusiness managers, and owners that are occurring today or expected in the next 35 years. Such issues include fresh water availability, world population issues, renewable energy, political changes impacting agriculture, and much more. The overall goal of this course is to learn from the body of knowledge that we have the challenges facing farming and agribusiness given the occurring and impending societal issues of our world that are examined in the course.

FE 2201 International Food Policy (Spring 2017) (taken abroad at University College Cork)

Module Objective: To inform students of key elements of contemporary international food policy.

Module Content: Introduction to the scope of food policy; absolute and comparative advantage; food policy and trade linkages; developing and developed world food trade patterns; the WTO; case studies of food policies.

Learning Outcomes: On successful completion of this module, students should be able to:

Define food policy; Appreciate the importance of food policy in development; Describe the influence of WTO in food policy; Link changes in food policy to processes of globalization; and Link food policy in action to specific examples.

GG 3045 Food Geography (Spring 2017) (taken abroad at University College Cork)

Module Objective: To critically evaluate the emergence and development of the contemporary global food system; and to examine the social, economic and environmental consequences for the many different spaces that support the production, processing, distribution, retailing and consumption of food in this highly integrated global industry.

Module Content: This module addresses the contemporary global food system: what, how, where and why food is produced. It examines the evolution and co-existence of different agricultural systems around the world; the role of corporate actors in the transformation and retailing of global foods; and the changing nature of consumers and consumption within this system. The module will explore the dynamics and contradictions of a food system that, while heralding ever-widening consumer choice, leaves one billion people food insecure and hungry; and impacts significantly on the global environment.

Learning Outcomes: On successful completion of this module, students should be able to:

Demonstrate a sound general understanding of the environmental, political, economic, social and cultural dimensions of food production, distribution and consumption. Define and assess the nature of the linkages between producers, intermediaries and consumers in the contemporary global food system. Develop a more critical analytical approach toward the activities and representation of transnational food and agribusiness corporations.

HI 360 U.S. Agricultural History (Spring 2018)

U.S. Agricultural history from colonial era to present. Attention to the major economic, social, political, environmental and cultural forces that shaped American agriculture from the 16th century to 21st century. Discussion of the role of technological change and evolution of governmental policy in U.S. agriculture. Exposure to major episodes demonstrating fundamental changes and continuities in U.S. agriculture. Discussion of the diversity of American farmers and farmworkers and their struggles for equality and access.

HI 481 History of Life Sciences (Spring 2018) (special Jefferson Scholar section)

Historical context of the individuals, ideas, scientific practices, and social goals that created the core concepts of the modern biological sciences, from Renaissance medicine to molecular

biology, with a focus on interconnections of the scientific knowledge and perspective of the life sciences with other aspects of culture, including other sciences, views about nature and life, religious belief, medical practice, and agriculture. Topics include the development of biological experiments; theories of ecology and evolution; the chemical understanding of health, food, and drugs; and the modern molecular revolution.

SOC 350 Food and Society (Spring 2019)

Relationships among individuals, groups, and organizations in the production, consumption, and distribution of food. Influences of gender, class, race, and ethnicity. Impacts of laws and regulations, markets, and social movements.

STS 323 World Populations and Food Prospects (Spring 2019)

Examination of the dynamics of population size and food needs, production, distribution and utilization. Consequences of inadequate nutrition and food choices, efforts to increase the compatibility of effective food production systems and alternate crops and cropping systems examined.

ARE 433 U.S. Agricultural Policy (Fall 2019)

Government economic policies and programs affecting agricultural inputs and farm products. Analysis of the rationale, objectives, and major types of agricultural programs and their effects on resource allocation and income distribution within agriculture and between agriculture and the rest of the economy.

IDS 490 Interdisciplinary Methods and Issues (Fall 2019)

Capstone seminar for students in the IDS self-design major. Intensive study of student's area of concentration, leading to a major research paper.

ADDITIONAL COURSE: FE2203 Food Economics (taken abroad Spring 2017 at UCC)

Module Objective: To develop appropriate methods and constructs to enable students to examine issues dealing with the agri-food sector.

Module Content: Economic theory of household food consumption, profit-maximising food producers, commodity and food markets and agricultural policy impacts.

Learning Outcomes: On successful completion of this module, students should be able to:

Explain household food production and consumption decisions Explain the economic theory behind profit maximising investment and production decisions among food firms Explain the theory behind commodity and food price formation Explain how agricultural and food policies influence food prices and social welfare Explain the weaknesses of the economic supply and demand model from a food sector perspective

Learning Objectives for Self-Design Degree

Concentration Title: Influence and Impacts of Agriculture and Food Systems

Student will be able to:

- List key statistics involving food production, food distribution, agricultural commodities, imports/exports, and food security of the US and other important nations
 - OGG 3045 Food Geography: This course is aimed at uncovering the broad scope of the food system, specifically its size and influence. Will provide a background in modern data, statistics, and research on the enormous concentration of power in the food system and the consequences.
 - o STS 323 World Populations and Food Prospects: I hope to learn key statistics that may point towards unsustainable agricultural practices or highlight weaknesses in the food system. Learning these statistics and figures can then help to concentrate further research and discovery in areas that may be overlooked.
- Identify major past and present policies or trade deals and their effects on food distribution, prices, and agricultural practices in the context of World System Theory
 - O ARE 495 Societal and Global Issues of Agribusiness and Farming: This course provides a sociological introduction to World Systems theory and the paradigm shifts of developmental economics, especially pertaining to global agriculture. It offers introduction in to critical analysis of institutional structures that shape and define our food system, yet hold little accountability to the public.
 - o FE2201 International Food Policy: Offered at an abroad institution, this course offers the chance to evaluate international food policy from a perspective other than the American one. It also identifies the key role of multinational organizations in shaping the policy that affects the global food system.
- Understand political motivations that influence agricultural policy and the impacts of those policies on farms, food systems, and consumers

- O ARE 433 U.S. Agricultural Policy: This course will provide a deeper insight to the policy decisions involving agricultural production, as well as the economic welfare motivations that influence those decisions. I hope to learn the current political mindset towards agriculture from this course.
- O SOC 350 Food and Society: I hope to gain a better understanding of how food and its production influences social structures. This course will also provide examples of how politics and regulations affect food access and drive social or cultural change.
- HI 360 U.S Agricultural History: To provide a background of past U.S.
 agricultural policy. I hope to learn about how policy adapted over time to changes in labor markets and progress in agricultural technology, especially surrounding ethical issues.
- Understand economic factors that motivate consumer and agribusiness decisions, as well
 as the consequences of those decisions
 - o FE2203 Food Economics: This course will further my knowledge of economic theory and directly apply economic theory to food markets, thus exposing areas in which food markets do not behave like "normal" markets. I hope to learn how to maximize the efficiency of the food system so as to prevent waste and environmental degradation while still ensuring nutrient access for people.
- Identify the role of science, farming methods, and agricultural technology in the food system and their potential for solving food insecurity
 - o HI 481 History of Life Sciences: This course will examine the development of science and its role in the current creation of food, including chemical processes. I believe that this course will benefit me by highlighting the paradigm shifts of life sciences that make up the basis of food production and processing.
 - O ARE 494 Societal and Global Issues of Agribusiness and Farming: From this course I will have a better understanding of how agricultural technology corporations influence the food system and structure of power within society through their increasing control on food prices.

- Map the role of agriculture and food in society throughout history and across multiple cultures
 - HI 360 U.S Agricultural History: This course will provide a deep understanding
 of the role of agriculture within the American culture. I can use this knowledge to
 then compare American agriculture to that of other countries and food systems.
 - O SOC 350 Food and Society: This course is directly aimed at the cultural and historical relevance of food in societies throughout time. I hope to dive deeper into understanding how food and food access is related to social movements and political stability.
 - STS 323 World Populations and Food Prospects: This course will examine how different approaches to agricultural in different time periods and regions affects overall nutritional access of communities.
 - OGG 3045 Food Geography: I hope to discover connections between geopolitical factors and the consequences they have on the food system. This class will hopefully provide the knowledge for examining the interconnectedness of the food system and all of its players in the social and political realm.
- Develop a sociological imagination to gain a perspective on how food and agriculture contribute to global inequality, world health, environmental sustainability, and political economy
 - All courses are intended to contribute to this objective because a sociological imagination requires one to constantly question the current paradigm. I believe that all my courses are aimed at questioning the current food system and will improve my knowledge of the interconnectedness of agriculture and various other domains. The ultimate method of developing a sociological imagination is learning the connections between seemingly unrelated things and then questioning the system that supports the web of connections. This ultimately requires a joint effort of multiple courses from multiple perspectives.

 Apply knowledge to address local food concerns, including food security, nutrition, and sustainability

IDS 490 Interdisciplinary Methods and Issues: Provides the opportunity for me to apply knowledge from various courses towards a tangible product, while also enabling me to interact with local contributors to my field and make con



My Pack Planner

Career: Undergraduate Pla



2017 Spring Term

Course	Title	Units	Typically Offered	PreReq	Requirement
MAE 201	Engr Thermodyn I	3.00	Offered	Not Met	
PHI 340	Philosophy Science	3.00	Offered		
	Total Units	6.00	-		

2017 Summer Term 2

Course	Title	Units	Typically Offered	PreReq	Requirement
ARE 304	Agribusines Mgmt	3.00	Offered	Met	
	Total Unit	s 3.00			

2017 Fall Term

Course	Title	Units	Typically Offered	PreReq	Requirement
BAE 305	BE Circuits	4.00	Offered	Not Met	
BAE 325	Intro Geomatics	3.00	Offered	Met	
BIO 183	Intro Bio Cell/Mol	4.00	Offered	Met	Biology
HESA 226	Skin and Scuba Div I	2.00	Offered	Not Met	8 2 1 · 20 2
MAE 208	Engineer Dynamics	3.00	Offered	Met	CE 215 or MAE 208
MAE 214	Solid Mechanics	3.00	Offered	Met	CE 313 or MAE 314
	Total Units	19.00			

2018 Spring Term

Course	Title	Units	Typically Offered	PreReq	Requirement	
BAE 315	Prop Bio Eng Mat	3.00	Offered in Spring Only	Planned		
BAE 361	Anly Meth Engr Des	3.00	Offered in Spring Only	Met		
HI 481	HI of Life Science	3.00	Offered in Spring Only	Met		
MAE 308	Fluid Mechanics I	3.00	Offered in Fall Spring Summer	Not Met	CE 382 or MAE 308	
MB 351	Gen Microbiology		Offered in Fall Spring Summer	Met	Advanced Biology Elective	
	Total Units 15.00					

2018 Summer Term 1

Course	Title	Units	Typically Offered	PreReq	Requirement
STS 214	Intro Sci Tech Soc	1 4 (11)	Offered in Fall Spring Summer		
	Total Units	3.00			

2018 Fall Term

Course	Title	Units	Typically Offered	PreReq	Requirement	
ARE 311	Agricultural Mkts	3.00	Offered in Fall Only	Met		
BAE 302	Transport Phenom	3.00	Offered in Fall Only	Not Met	BAE 302	
BAE 401	Instrum Biol Syst	3.00	Offered in Fall Only	Not Met		
BAE 462	Machinery Dsn Appl	3.00	Offered in Fall Only	Planned		
EC 301	Intermed Microecon	3.00	Offered in Fall Spring Summer	Met		
ENG 331	Commun Engr & Tech	3.00	Offered in Fall Spring Summer	Met	Advanced Communication	
	Total Units 18.00					

2019 Spring Term

Course	Title	Units	Typically Offered	PreReq	Requirement
BAE 322	Intr Food Proc Eng	3.00	Offered in Spring Only	Not Met	BAE Elective
BAE 425	Ind Micro & Biop	3.00	Offered in Spring Only	Planned	BAE 425 or 474
HI 360	U.S. Agricultural History	1 4 1111	Offered in Spring Only		
SOC 350	Food and Society	3.00	Offered in Spring Only	Not Met	
STS 323	World Pop & Food		Offered in Fall Spring Summer		
	Total Units	15.00			

2019 Fall Term

Course	Title	Units	Typically Offered	PreReq	Requirement
ARE 433	U S Agric Policy	3.00	Offered in Fall Only	Planned	
BAE 451	Engineering Design I	2.00	Offered in Fall Only	Planned	produce to
IDS 490	Intdis Meth Issues	3.00	Offered in Fall and Spring	Not Met	
STS 301	Sci & Civilization	3.00	Offered in Fall Spring Summer	Met	Ethics Elective
	Total Units	11.00	•		

2020 Spring Term

Course	Title	Units	Typically Offered	PreReq	Requirement
BAE 452	Engineering Design II	2.00	Offered in Spring Only	Planned	
	Total Units	2.00			

Last Update: 4/2/2017 12:30 PM