

Academic Senate
Agenda
Tuesday, October 1, 2019
UCB 202AB

10:00 AM: Business Session

1. Call to Order and Roll Call
2. Approval of Minutes: April 30 (A and B), 2019 and September 3
2. Open Forum: items of importance to the Academic Senate
A.
4. Reports
A. Senate President – Sandy Alspach
B. Senate Vice President – Mike Berghoef
C. Senate Secretary – Melinda Isler
5. Senate and University Standing Committee Reports
A. University Curriculum Committee – Rusty Leonard
B. Academic Program Review Council – Jean Inabinett
C. General Education – Victor Piercey
6. Old Business: requiring Senate action
A. University Curriculum Committee Manual Revisions – Rusty Leonard
(postponed for further review)
7. New Business: requiring Senate action
A. University Curriculum Committee proposals – Rusty Leonard
B. Creation of a University Assessment Committee – Katie Axford
8. Announcements to the Senate
A. President David Eisler
B. Provost Paul Blake

11:00 AM: Information Session: Open to the University community

1. Other Reports
A. Student Government Association – President Allyson Faulkner (or representative)

B. “Conversation with the Senate”: Update on Higher Learning Commission report – Mandy Seiferlein, Jeff Ek, Kristi Haik
2. Open Forum: items of interest to the University community
A. Greetings from FSU Emeriti Association President Doug Haneline (Memorial?)
B. Comments and Announcements
(by prior arrangement)
3. Adjournment to 10:00 AM, Tuesday, November 5, 2019
“Conversation” guests: Kaitlin Zies, Title IX Coordinator; Kylie Piette, Director of Equal Opportunity

**Minutes
Ferris State University
April 30, 2019- 10:00 a.m.**

Members in Attendance: Alspach, Aslakson, Axford, Bacon, Bajor, Baran, Berghoef, Bright, Daubert, Drake, Emerick, Epps, Fadayomi, Gray, Hanna, Harvey, Herrington, Inabinett, Isler, Johnson, Lotoczky, Moore, Rumpf, Shimko, Smith, Swinkunas, Thomson, Todd, Waters, Weaver, Wolfer, Wyss, Zyla

Members absent with cause: Calkins, Desmond,

Members absent:

Ex-Officio and Guests Ex-Officio and Guests: Archer, Goosen, Hawkins, Hoisington, Jackson, A., Johnson L., Johnson, M., Jones, Leonard, Nicol, Pilgrim, Reifert, Samuels, Seiferlein

1.	President Alspach called the meeting to order at 10:02 a.m.
2.	Approval of Minutes. Senator Zyla moved to approve the minutes of April 2, 2019. Senator Weaver seconded. Secretary Isler noted some changes in attendance records Motion passed by 97% to 0% with 3% abstaining.
3.	Open Forum Secretary Isler noted that after the senate meeting, across the hall the library OER exhibit of displays across the hall.
4.	Officer Reports/ President Report President Alspach had no report. Vice President Bacon reported that he APR, Athletic Advisory Committee and University Committee Curriculum Committee and General Education Committee. Notices will be going out after the Senate meeting. Secretary Isler had no report.
5.	Senate Committee Reports University Curriculum Committee Chair Rusty Leonard reported on 13 information only proposals and 3 proposals for a vote. Vice President Bacon asked why there was not a vote on proposals marked create. Leonard explained that this is current practice and is for a single course. Leonard confirmed that it required 3 course changes to require a senate vote and is part of the manual. Senator Todd asked what to do with a mistaken form b sent. Leonard clarified that it was sent incorrectly and resent to the correct person. Chair d also noted that a follow up consult was sent to the Sociology Program from the concerns raised during the April 2, 2019 Senate meeting. Senator Herrington gave the annual diversity report- noting on the reaching out to student groups to promote diversity activities. They also investigated grants for student groups. President Alspach asked that the report be submitted in writing to the Secretary.
6.	University Curriculum Committee Proposals. Senator Zyla moved to approve proposal 19-024 on the Digital Media Software engineering with a substantial revision. Seconded by Senator Weaver. The coordinator was present to describe updates in an area that keeps changes. The program operates out of Grand Rapids and compared to other programs in state and national standards. Motion passed 88% to 12% with 0% abstaining. Senator Zyla moved to approve proposal 19-057 on the Integrated Marketing Program deletion. Senator Fadayomi seconded. Champion Susan Jones explained the field has moved away traditional advertising to a new certificate and minor in digital advertising. Senator Baran asked what bachelor degree would be moved into. Jones said they were moved into a marketing BS. Motion passed 94% to 3% with 3% abstaining.

	<p>Senator Zyla moved to approve proposal 19-065 for the Social Work Courses. Seconded by Senator Weaver. Leonard noted there was an error with UCC vote count. It should be 5 support, 1 support with concern and 1 non-support. Will fix on forms. Coordinator Wendy Samuel explained the need for the school social work certificate as required by the Michigan Department of Education and the 18 learning outcomes. This is not a Ferris certificate but one for the Michigan Department of Education. 3 classes were created. Senator Flachs expressed concern about the lack of consultation with the school of Education who would like to be involved. At a minimum a consultation request. Samuel noted that the Social Work course relate to 7 outcomes of those required. Samuels said that they were doing this process in a compressed timeframe. If no approval, the process will be set back for a year. Motion passed 82% to 12% with 6% abstaining.</p>
7.	<p>Announcements / Campus Committee Reports. President Alspach adjusted the order of the Senate to allow President Eisler to make reamarks. President Eisler discussed the state budget for higher education with competing proposals out of the Senate and House. He continues to advocate for TIP funding and noted there is still confusion over the 2 year terms and the result of the redistricting in the court.</p>
8.	<p>Senate Charter Amendments Rules Committee chair Melinda Isler explained that the proposed charter changes will be brought forward as five separate votes.</p> <p>Committee chair Isler moved to support an addition to charter in section 3, Article 4 to define ex-officio members of the senate as non-voting. Seconded by Senator Weaver. Motion passed unanimously</p> <p>Committee chair Isler moved to support the recommendation to add Athletic Advisory Committee and General Education as part of spring committee appointments in Article 9, Section 3. Seconded by Senator Epps. Motion passed 100%.</p> <p>Committee chair Isler moved to require Senate committees to have a quorum to conduct business referenced in Article 9, Section 2. Seconded by Senator Baran. Senator Zyla noted that the UCC is not always having a quorum present. It was noted that the passing of the proposal requires the vote, but discussion can occur without all members present. A quorum is defined by Roberts Rules of Order as a majority +1. The question was asked to the parliamentarian whether it was filled seats or total committee. Senator Zyla moved to amend to a quorum of filled seats. Seconded by Weaver. Amendment passed 86% with 9% opposed and 5% abstaining. Motion passed 77% with 17% opposed and 6% abstaining.</p> <p>Committee chair Isler moved to change the election of the non-tenure track senators to the spring election cycle for a 2 year appointment. This was a cleanup because the charter has a process for replacing senators who leave the university. This group is limited to 3 members and does not follow the apportionment formula. If all senators were not reappointed in the spring the Senate Executive Committee can appoint someone to fill out the term. Isler noted another process has had the positions filled by others who had gotten votes in the election. Vice President asked if they are for process if there were a process for SEC member was a flaw in a process and should be addressed. Secretary Isler noted she was not certain of the process. Senator Johnson asked about the part about number of the group on Executive Committee. Senator Hanna asked that this be addressed by the next Rules Committee. Senator Epps agreed and asked for the withdrawal of motion. Senator Gray disagrees because people have a way to vote.. Senator Hanna asked if group is from a single college. Secretary Isler said that her list form last fall they were from most colleges. Vice-President Bacon noted that there is a large number individuals but not on campus full time. References to non-tenure track faculty members will be removed from Article 4, Sections 3, 7 and 10. This motion passed 97% to 0% with 3% abstaining.</p> <p>Committee chair Isler moved to create the position of treasurer. Seconded by Senator Weaver. Senator Inabinett noted that this was a position needed by the executive board to help manage the budget and shifting priorities. It was noted that apart from a president there is not a clear process to replace executive committee e members. Motion passed 74% to 18% with 9% abstaining.</p>
9.	<p>Retiring Senators</p>

	President Alspach recognized all retiring senators, including Vice-President Charles Bacon.
10	Senate adjourned at 11:20 a.m.

Minutes
Ferris State University
30 April 2019- 11:00 a.m.

Members in Attendance: Alspach, Aslaskson, Axford, Bajor, Baran, Beaudry, Berghoef, Bright, Colley, Daubert, Drake, Fadayomi, Flachs, Foulk, Gray, Hanna, Harvey, Herrington, Isler, Jadhov, Johnson, Kuiper, Lamberts, Lotoczky, Moresi, Pisani, Shimko, Smith, Swinkunas, Thomson, Todd, Waters, Weaver, Wiltshire, Windowiecki, Wolfer, Zube

Members absent with cause:

Members absent:

Ex-Officio and Guests: Archer, Goosen, Hawkins, Hoisington, Jackson, A., Johnson L., Johnson, M., Jones, Leonard, Nicol, Pilgrim, Reifert, Samuels, Seiferlein

1.	Elections chair Chuck Drake called the meeting to order at 11:05a.m.
2.	Election of President. Senator Alspach was nominated for President and accepted. Senator Alspach was elected by acclamation.
3.	Election of Vice President Senator Berghoef was nominated for President and accepted. Senator Berghoef was elected by acclamation.
4.	Election of the Secretary Senator Isler was nominated for President and accepted. Senator Isler was elected by acclamation
5.	At-Large Executive Committee Members Election Senators Axford, Flachs, Waters and Weaver were nominated for At-Large Members and accepted. They were elected by acclamation.

Minutes
Ferris State University
3 September 2019, 10:00 a.m.

Members in Attendance: Alspach, Aslaskson, Axford, Balanda, Bajor, Beaudry, Berghoef, Bright, Daubert, Drake, Emerick, Fadayomi, Flachs, Foulk, Gray, Hanna, Harvey, Herrington, Isler, Jadhov, Johnson, Joseph, Kuiper, Lamberts, Lotoczky, Moresi, Pisani, Shimko, Smith, Swinkunas, Todd, Waters, Weaver, Wiltshire, Wolfer, Zube

Members absent with cause: Baran, Colley

Members absent: Winowiecki

Ex-Officio and Guests: Archer, Blake, Damari, Eisler, Ek, Franklund C., Goosen, Greene, Haik, Hegenaur, Hoisington, Inabeinett, Johnson J., Johnson L., Johnson, Leonard, Nicol, Peircey, Pilgrim, Reifert, Seiferlein, Scholie

1.	President Alspach called the meeting to order at 10:05 a.m.
2.	Secretary Isler gave a brief overview of the clickers for voting and for determining a quorum. She also thanked the group for the patience with the delay in starting the meeting due to technical issues. The April 30 th meeting minutes were not submitted in time for the packet so they will be deferred to the October 2019 meeting for approval.
3.	<p>Open Forum</p> <p>Amy Greene from Extended and International Operations passed out materials relating to HatchEd which will occur on September 25-26 in the University Center. It can be a variety of formats from poster to presentation or roundtable. HatchEd is Ferris State University's collaborative conference and idea incubator for all faculty and staff. HatchEd is focused on nurturing innovation and empowering innovators in the higher education space.</p>
4.	<p>Officer Reports.</p> <p>President Alspach discussed the table-talk discussions at the retreat and noted that summaries of the discussions will be on the Senate website for review. She said that the senate will work to address ideas which were proposed and thanked all resource people who also came. She recognized Jimmy Joeseph who replaced James Shimko and Peter Balanda who is serving during Mark Thomson's sabbatical leave. She asked attendees to also fill out the electronic survey so that the new format could be evaluated. She is still looking for a parliamentarian and announced the Daisy Daubert will be the Elecons Chair with assistance from Emily Aslakson.</p> <p>Vice-President Mike Berghoef encouraged senators and faculty to look for the upcoming call for senate committee applications. Senator Wolfer asked if we will be informed what the terms are? Berghoef said that he would make sure that information is also sent out. Secretary Isler noted that letters should define terms when appointed. He also noted that he was working on a proposal on Academic Amnesty which had slipped through the cracks in the implementation because of office changes. He is working with Elise Gramza the Registrar and Academic Affairs to move this forward. This is listed as Item 6 on the packet agenda.</p> <p>Secretary Isler noted that the non-tenure track faculty election will be started by the end of the week. Then, there will be an upcoming charter referendum which will go to the Board of Trustees in December if approved. She also thanked Danette for all that she has done for the office. Senator Gray asked if master list will be sent with forms. Isler said yes. Alspach noted some meet in September. But several do not. Alspach also noted in response to question from Gray that not all General Education appointments are yet run through the Senate office.</p>
5a	<p>University Curriculum Committee</p> <p>Chair Rusty Leonard noted that there are 5 information only proposals and be sending experimental courses also through the process. They are still looking from members from the College of Education and Human Services and College of Business. He will be presenting manual changes later in the meeting.</p>

5b	<p>Academic Program Review APR Chair Inabinett noted that she is still seeking members and they have begun to meet since the retreat. This year the group is reviewing two accredited programs and two non-accredited programs. The first set of recommendations will be received at the regular meeting. There will not be a separate meetings. They are tentatively meeting 4-6 on Tuesdays and Thursdays. She said schedules are still be redone so please contact her if on the old list for next year.</p>
5c	<p>Arts and Lectures President Alspach announced the lecture by Veronika Scott on October 10th. She is an environmental design consultant and social activist who has won the CNN Hero of the Award. She asked any current committee members if they had met yet to arrange further details. Senator Gray noted that chair Catherine Arroee has declined to have a meeting until new members are appointed in October..</p>
5f	<p>International Education Plan International Education Piram Prikasam reported on the international education plan which he encouraged all to read. He noted that he was seeking active participants in a deliberative dialogue. The last plan was written in 2008. The plan includes benchmarking programs to internationals standards, infusing international perspectives in student learning; aligning policies, practices and priorities for global ecosystem, ensuring the university is welcoming for students and scholars from around the world and recognizing internationalization is an administrative/leadership endeavor.</p>
6	<p>UCC Manual Updates Motion to support made by Senator Weaver. Seconded by Senator Harvey. Form E/F and Form A have fields regarding required instructor qualifications (Required by Higher Learning Commission). Form E/F require an instructional dollars exception (required by Registrar). Form L provides a proposal log of suggested changes. Also added is an optional manual checksheet. Questions were asked about the instructor qualification form. Senator Fadayomi said that some courses taught my multiple faculty. Leonard said this is only for new courses to fill out. Seiferlein said it is really the course minimum and not really specific to an instructor. Senator Gray suggested wording be changed and asked why Dean required to sign off. Leonard said dean check mark makes Dean is aware in case new faculty are needed. Leonard said stating Minimum qualifications in title is possible. Zube asked if this makes dean possible for being required to hire new faculty. Leonard said it was a communication channel but not necessarily a trap. An example was looked for and sample document. President Alspach asked for postponement to October. Senator Jadhov moved to postpone seconded by Zube. Senator Gray asked if we discuss other changes? Senator Axford asked if documents/forms on website. Leonard said yes that forms are on website. It was asked if the forms are not already used and what should you do. Leonard said forms are in use and can be used. Motion to postpone passed 67% to 33%. Leonard explained that the Form L will allow for comments which do not fit on Form A. Senator gray asked a questions about who could edit that. He questioned whether it should be limited to proposers/ There was a need for editing with tracking. Mechanisms such as a google sheet were ssggested.</p>
7	<p>General Education Proposal Process Senator Zube moved to discuss the Gen Ed approval process. Senator Gray seconded. General Education Chair Victor Peirce said the 3 aims were to 1) clarify the curriculum process, 2)track proposals and consultations with the RAM committee. Need members for all subcommittees (see Victor for details). RAM will send out appropriate consultations. There is a deadline of 15 working days for committees to address proposals. In order to reduce loop of revision, after 2 revisions it must be forwarded from subcommittee to General Education Committee. If the two disagree, proposal sent to Academic Affairs for final decision. Senator Jadhov asked if this limits revision to 4? Victor said yes. Senator Beaudry asked if what happens if not address? Peirce said proposals sent back should have adequate comments. Senator Hanna asked it to be noted that this does not go through department faculty or dean. It appears that faculty are ruling by subcommittee and not by process. It is the program faculty that are the guardians of the program offerings. Peirce said no, but this is a separate process but assumption is that course proposal also goes through UCC. Also not all Gen Education subcommittee chairs are not Arts and Sciences. President Alspach called for a vote to support. Senator Weaver noted the motion on the floor was actually to discuss. Senator Gray moved to support and Senator Weaver seconded. Motion passed 84% to 13% with 3% abstaining.</p>

8	<p>Athletic Recognition Athletic Advisory Chair Cathy Archer recognized Spring 2019 sports for Mens Tennis, Mens Golf, Mens Track and Field and Womens Track and Field. GLIAC awards and national recognition were included. Photos were taken of members and coaches able to be present.</p>
9	<p>Student Government Report Student Government Representative Zach Deaubel came to say that they continue to organize and seek new members. They will be participating in the alleyway cleanup. They are also creating a new governing document.</p>
10	<p>Strategic Planning Committee Jennifer Johnson not that strategic plan documents were sent in the packet. She referred to the website for strategies on how to make the plan work. They have 14 key strategic targets which will be live with data and the plan is going to the Board of Trustees for a vote on October 4th. Comments can be made at the September 5th and 10th SPARC committee meetings. Senator Zube addressed a question about providing adequate resources for implementing plan (recognizing that Johnson personally cannot answer it). She noted the concern and said she hopes that adequate resources will be included.</p>
11	<p>HLC Co-chairs Ek and Haik gave a summary of process. They observed they are 1 year away from the submission. They are sending out newsletters with themes- including: assessment; the Ferris-Kendall relations; graduate programs; scholarship; equity and diversity. A video will be presented in the October meeting.</p>
12	<p>Announcements President Eisler announced that there was still not a state budget but that they were possibility of operating on a continuing budget. This is a more significant issue for public schools. He noted the beginning of the year went smoothly and he appreciates everyones efforts.</p> <p>Provost Paul Blake encouraged all to work on the Innovation fair cosponsored by the Senate and Academic Affairs.</p> <p>The full HLC report has been moved to the October 2, 2019 meeting.</p>
13	<p>The Semate adjourned at 11:47 a.m.</p>

University Assessment Committee (UAC) – Membership and Charges
DRAFT 2.28.19

MOTION: Create a University Assessment Committee (UAC) whose purpose will be to establish and facilitate a University-wide assessment and data use process. The UAC's initial work should be focused on generating Committee charges and should be informed by the final report of the 2018-2019 Data Driven Decision Making Task Force and notes from the *Data Driven Decision Making: The Role of the Academic Senate* discussion table at the 2019 Academic Senate Retreat.

Proposed University Assessment Committee (UAC) Membership:

- One faculty member from each Senate Representative Unit
- One representative from the Academic Senate
- Two representatives from the Academic Affairs Assessment Committee (appointed by Academic Affairs)
- Two representatives from the Student Affairs Assessment Committee (appointed by Student Affairs)

* 1) Arts & Sciences; 2) Business; 3) Education and Human Services; 4) Engineering Technology; 5) Extended and International Operations; 6) Faculty Center for Teaching and Learning; 7) FLITE; 8) Health Professions; 9) Michigan College of Optometry; 10) Pharmacy; 11) Retention and Student Success

(List taken from AAAC Draft Charter. Highlighted units are not routinely included on Senate Committees. Need to discuss inclusion/exclusion.)

From: [Kristi L Haik](#)
To: [Sandra L Alspach](#)
Cc: [Mandy R Seiferlein](#); [Jennifer D Hegenauer](#); [Tara E McCrackin](#); [Jeff A Ek](#)
Subject: UPDATE: HLC Discussion 10-1-19
Date: Tuesday, September 24, 2019 1:55:48 PM
Importance: High

Good morning Academic Senators!

We are looking forward to talking with you at the October 1 Academic Senate meeting. We are going to focus our time and conversation around the areas of focus that were identified by the peer review team in the 2011 HLC report. These topics include:

1. KCAD – Ferris Relationship (clarity of integration)
2. Assessment (course, major, minor, certificate, general education, co-curricular)
3. Graduate Education (organizational commitment and evaluation of teaching)
4. Scholarship (documentation of faculty scholarship & community engagement)
5. Equity and Diversity (faculty groups, instructional design, retention, curriculum)
6. Instructional Technology and Learning Resources (infrastructure, planning, online, library)
7. Off-campus performance reviews for adjunct faculty (create a common tool and tracking system)

Specifically, we hope to discuss items 1, 2, and 4.

1. KCAD – Ferris Relationship (clarity of integration)
 - a. Can you think of additional strategies to foster more collaboration with KCAD?
2. Assessment (course, major, minor, certificate, general education, co-curricular)
 - a. Can you think of ways to streamline the documentation of assessment?
 - b. What concerns do you have about documenting assessment?
4. Scholarship (documentation of faculty scholarship & community engagement)
 - a. Does DM contain the information you would like to communicate to HLC?

Thanks for your time and input! The HLC Leadership Team (Jeff Ek, Kristi Haik, Jennifer Hegenauer, Tara McCrackin, Mandy Seiferlein)



An aerial photograph of the Ferris State University campus, showing various academic buildings, parking lots, and green spaces. The image is partially overlaid by a white-bordered graphic on the left side.

FERRIS STATE
UNIVERSITY

Higher
Learning
Commission

Reaffirmation of
Accreditation

2020

Areas of Focus

Kendall-Ferris Relationship

Assessment

Graduate Education

Scholarship

Equity and Diversity

Instructional Technology & Learning Resources

Off-campus performance review processes for adjunct faculty



Areas of Focus



KCAD – Ferris Relationship (clarity of integration)

Can you think of additional strategies to foster more collaboration with KCAD?

Assessment (course, major, minor, certificate, general education, co-curricular)

Can you think of ways to streamline the documentation of assessment?

What concerns do you have about documenting assessment?

Scholarship (documentation of faculty scholarship & community engagement)

Does Digital Measures contain the information you would like to communicate to HLC?

Important Dates:

November 1, 2019

Draft of the Assurance Argument sent to the campus community

November 2019 – January 2020

Town Halls for campus community

March 6, 2020

Quality Initiative final report submitted to HLC

September 7, 2020

Portal locked to additions/editing

October 5 – 6, 2020

Site Visit



COB College Curriculum Meeting

4/17/19

Members present: Alex Manga, Lianne Briggs, Steve Shuiling, Elies Kouider, Emily Fransted, Jeff Ek, Sharon George

Members absent: Felix Bollou

Proposal: 19-051 – Economics Minor Update

Discussion: At the outset, the committee notes the deletion of ECON 303 in this proposal is inconsistent with the references to ECON 303 in the upcoming proposal modifying the COB core. The committee expressed concerns regarding receiving this proposal with Form A incomplete. Committee noted the following concerns regarding the proposal.

1. Regarding Form EF for ECON 321 – No assessment information is included in subsection Q. The committee is concerned regarding the use of lower order Bloom's terms in the course outcomes for a 300-level course. The Committee suggests revising the outcomes to include higher order language.
2. Regarding Form EF for ECON 440 – No assessment information is included in subsection Q. The committee is concerned regarding the use of lower order Bloom's terms in the first five of the course outcomes. The Committee suggests revising the outcomes to include higher order language.
3. Regarding Form EF for ECON 451 - No assessment information is included in subsection Q. No course outline or time allocation is included in subsection R.
4. Regarding Form EF for ECON 460 – No assessment information is included in subsection Q. The course outcome language could be streamlined by focusing on the verb 'analyze' in outcomes 1 and 2 and evaluate in outcomes 3 and 4.

Action: Alex called for a vote. Five committee members **approved the proposal with concerns** set forth in these minutes, 1 abstained.

Proposal: 19-034 – Accounting Graduate Certificate Creation

Discussion: The committee notes this proposal was reviewed and supported previously. Alex advises the proposal was revised by the RAM committee after several amendments were made and, accordingly, had to be resubmitted to the curriculum process. The committee notes the concerns it raised during the proposal's first trip through the curriculum process were addressed to the satisfaction of the committee.

Action: Alex called for a vote. Five committee members **approved the proposal**, 1 abstained.

Proposal: 19-059 – Information Security & Intelligence Program Revision

Discussion: The committee notes Form A indicates a department member supported the proposal with concerns. The committee expresses desire to review the concerns as part of its consideration of the

proposal Steve S. provides insight on issues raised at the department level. Committee noted the following concerns regarding the proposal.

1. Regarding Form A, #2 – In proposer’s item #2, the word ‘need’ should be replaced with ‘needed’ in “a lower level ‘Network Security’ course is need as a prerequisite to the” In proposer’s item #5, “ISIN” should be added to the last sentence, “[a]dding in 121 brings us to 121 credits.” Moreover, the committee calculates the total number of credits for the bachelor’s degree is 120 instead of 121 as specified in the proposal. Additionally, ECON 221 is identified as an additional course in the program in the proposed checklist, but it is not mentioned in Form A. Form A should reflect this change.
2. Regarding the proposed check sheets – Elies advises STQM 380 is no longer taught and has been replaced by another course. The committee suggests STQM 380 be removed from the proposed check sheet. The committee notes that the total number of courses/credits laid out in the Semester Layout of Courses – Excluding Summer Semesters plan is 119. This is fewer credits than set forth on Form A.
3. The committee supports the suggestion made by Amy Greene to add COMM 221 as a choice for communication competency.
4. Steve S. provides additional explanation in response to the concerns raised by Gayle Lopez in Form B, indicating that the program feels the finance pieces previously addressed by MGMT 350 are addressed in PROJ 320.
5. Regarding Form EF for DFOR 454 – The name of the course should be included in II. The course is missing the desired term effective information. No assessment information is included in subsection Q. Because this is a new course, information included in P(i) and Q(i) should be moved to the proposed sections, P(ii) and Q(ii). The committee recommends the proposer consider reworking the outcomes to simplify them and include higher order Bloom’s taxonomy language.
6. Regarding Form EF for ISIN 209 – No assessment information is included in subsection Q. The committee is concerned regarding the use of lower order Bloom’s terms in the first five of the course outcomes. The Committee suggests revising the outcomes to include higher order Bloom’s taxonomy language.
7. The committee reviewed remarks by Amy Greene regarding program admissions, but concluded admissions requirements were outside of the scope of the committee’s charge.

Action: Alex called for a vote. Five committee members **approved the proposal with concerns** set forth in these minutes, 1 abstained.

CURRICULUM PROPOSAL SUMMARY AND ROUTING FORM

Form A

Form current on 02/27/19

Proposal Number: 19-051

Proposal Title: Economics Minor (ECON) Update

Type of Curriculum Action ([Click here for Definitions](#)): **Modification or elimination of a Minor, Concentration or Certificate**

Proposer's College: **BU- College of Business**

Proposer's Department: **MGMT - Management**

Proposer: Mark Brandly

Contact Person's Name: Mark Brandly Phone: **231.591.2443**

Email Original Form A and completed Forms E/F & G (when applicable) to fsucurriculum@ferris.edu

	Received	Initial Review	Proposer Approved Packet	Packet Complete	"Packet Complete" - The proposal packet is done with RAM review and is sent to the college for support.
RAM Review Dates:	1/17/19	1/22/19	3/5/19	3/28/19	
	Digital Signature of Representative (Do Not Print and Sign)				ACTION - Vote Count Required
Program Faculty					5 Support 0 Support with Concerns * 0 Not Support* 0 Abstain
Department Faculty (if applicable)					22 Support 0 Support with Concerns * 0 Not Support* 0 Abstain
School Faculty (if applicable)					___ Support ___ Support with Concerns * ___ Not Support* ___ Abstain
Department/School Administrator Gayle Lopez					<input checked="" type="checkbox"/> Support <input type="checkbox"/> Support with Concerns* <input type="checkbox"/> Not Support* <input type="checkbox"/> Abstain
College Curriculum Committee					___ Support 5 Support with Concerns * ___ Not Support* ___ Abstain
Dean Dave Nicol					<input type="checkbox"/> For Information Only <input checked="" type="checkbox"/> Approve <input type="checkbox"/> Approve with Concerns <input type="checkbox"/> Not Approved
University Curriculum Committee Rusty Leonard					7 Support 0 Support with Concerns * 0 Not Support* 0 Abstain
Senate Sandra Alspach					<input type="checkbox"/> For Information Only ___ % Support ___ % Not Support* ___ % Abstain
Academic Affairs Leonard Johnson					<input type="checkbox"/> Approved <input type="checkbox"/> Not Approved <input type="checkbox"/> Hold

After Digital Signature, forward to the next reviewer - After College Support, the Dean's office email signed to proposal to fsucurriculum@ferris.edu for UCC vote.

* Support with Concerns or Not Support must include identification of specific concern with appropriate rationale
 To be completed by Academic Affairs:

Board of Trustees (Date Approved)	Academic Officers of MI (Date Approved)	Date of Implementation

1. **If a PCAF is required, the President's Council must approve it *prior* to submitting this proposal to the UCC.**
Provide a link to the Academic Affairs website of the approved PCAF.
Provide link here, when applicable

2. **Proposal Summary:** Provide a detailed rationale including all curriculum action and desired date of implementation.

The Economics Minor program is in its third year and we are consistently maintaining 20-30 students in the program. In order to strengthen the program and meet the student demand for courses we need to update some course outcomes and add courses to our program.

The first proposal is to delete ECON 303, Economics of the European Union from our program. We no longer teach this course and it needs to be deleted from our checksheet.

Second, we are adding an existing course, STQM 322, Inferential Statistics to our program. This course covers the type of statistical analysis that we use in economics. We already accept this course as a substitute for a course in the economics minor and we are simply formalizing the current status of this course as it relates to our program.

Third, we are updating the course outcomes for ECON 321, Money and Banking, and ECON 451, International Economics. The previous outcomes do not correctly reflect the content for the courses, so we are replacing them with more accurate outcomes.

Finally, we are diversifying our course offerings by adding two courses to our program. ECON 440, Health Economics, is currently being offered for a second time as an experimental course. Health care is about 17 percent of the U.S. economy. This course is a valuable course and has shown to be a popular course for our students.

We are also adding ECON 460, Law and Economics, to our program. We received positive feedback from the students when this course was offered on an experimental basis. This is an important course for students interested in the economics of government policy.

3. **Summary of All Course Action Required - Complete a Form E/F for each course, email fsucurriculum@ferris.edu for more rows.**

Prefix	Course Number	Course Title (Existing, or Newly Created Course Title)	Action	General Education Attribute*
ECON	303	Economics of the European Union	Delete Course from FSU Catalog	<input type="checkbox"/>
STQM	322	Inferential Statistics	Add Existing Course to Program	<input type="checkbox"/>
ECON	321	Money and Banking	Modify Existing Course	<input type="checkbox"/>
ECON	451	International Economics	Modify Existing Course	<input type="checkbox"/>
ECON	460	Law and Economics	Create New Course and Add to Program	<input type="checkbox"/>
ECON	440	Health Economics	Create New Course and Add to Program	<input type="checkbox"/>
			Choose an item.	<input type="checkbox"/>

*Course has or will have a General Education attribute

4. Are there plans to offer blended or online courses? **Yes**
5. Will External Accreditation be sought? (For new programs or certificates only) **No**

If yes, name the organization involved with accreditation for this program.

Accrediting Organization name, when applicable

6. Email Original Form A and completed Forms E/F & G (when applicable) to FSU Curriculum (fsucurriculum@ferris.edu).

To be completed with RAM Consultation

7. Summary of All Consultations – RAM will provide a list of units affected and will assist in the completion of consultation form(s) required.

Form	Unit	Contact	Banner Program Title	Banner Program Code	Date Sent
Form B - UG	HP - SNUR - School of Nursing	Susan Owens	ECON 321 and ECON 451 outcomes are changing – no change to the checksheet	BSN conc (2284)	3/11/19
Form B - UG	BU - AFIS - Accountancy, Finance, Info Systems	Larry Bajor	ECON 321 outcomes are changing – no change to the checksheet	GE-BU-BS (2472) ACCF FIN	3/6/19
Form B - UG	AS - SBSC - Social & Behavioral Sciences	Meral Topcu	International Studies ECON 451 outcomes are changing – no change to the checksheet	ISTD-MNR	3/6/19
Form B	BU - MKTG	Jeff Ek	STQM 322 Existing course Added		3/28/19

Form C - FLITE - David Scott (Sent on 5-8-19 after review by the UCC)

8. Summary of Program/Degree Action Affecting Department Checksheets
RAM will provide CURRENT Checksheet(s) & PROPOSED checksheet(s) for each.

Action	Degree Type	Banner Program Title	Banner Program Code
Modification	Minor	Economics	ECON-MNR
Choose an item.	Choose an item.		

CONSULTATION FORM

Form B

Form current on 12/12/18

Proposal Number: 19-051

Proposal Title: Economics (ECON) Minor Revision

Proposer: Mark Brandy Department: **MGMT - Management**

Contact Person's Name: Mark Brandy Phone: 231-591-2433

Instructions: To be completed by each department affected by the proposed change, addition, or deletion. Potential duplication of coursework is reason for consultation.

1. This completed form must be forwarded with the proposal to the administrator of the department to be consulted.
2. The department must respond within 10 business days of receipt of this form to insure inclusion in the final proposal. The completed original is returned to the Academic Senate Office to be inserted into the proposal and a copy is returned to the initiator.

The department must acknowledge receipt of this form and the proposal in writing to the initiator.

Failure to respond by 10 business days of receipt of this form is interpreted as support for the proposal.

3. The Proposing Department must address any concerns raised by the consulted department. This response must be in writing and will be included in the proposal following the original consultation form.

The following programs/codes (checksheets) have been identified as being affected by the changes in this proposal (Contact FSUCurriculum@ferris.edu for this list):

ECON 321 outcomes are changing – no change to the checksheet

GE-BU-BS (2472)ACCFIN

Department: **BU - AFIS - Accountancy, Finance, Info Systems**

Administrator: Larry Bajor

Date Received: _____ Date Returned: _____

Signature: _____

Based upon department faculty review on: _____ (Date)

- We: Support the above proposal and authorizes updates to the checksheet(s) listed above.
- Support the above proposal with the modifications and concerns listed below and authorizes updates to the checksheet(s) listed above.
- Do not support the proposal for the reasons listed below and will submit a curriculum proposal to correct the checksheet(s) listed above as a result of these changes, if fully approved.

Comment Regarding the Impact this proposal has on current curriculum including prerequisites, scheduling, room assignments, and or/faculty load for your department. Use additional pages, if necessary:

CONSULTATION FORM

Form B

Form current on 12/12/18

Proposal Number: 19-051

Proposal Title: Economics (ECON) Minor Revision

Proposer: Mark Brandy Department: **MGMT - Management**

Contact Person's Name: Mark Brandy Phone: 231-591-2433

Instructions: To be completed by each department affected by the proposed change, addition, or deletion. Potential duplication of coursework is reason for consultation.

1. This completed form must be forwarded with the proposal to the administrator of the department to be consulted.
2. The department must respond within 10 business days of receipt of this form to insure inclusion in the final proposal. The completed original is returned to the Academic Senate Office to be inserted into the proposal and a copy is returned to the initiator.

The department must acknowledge receipt of this form and the proposal in writing to the initiator.

Failure to respond by 10 business days of receipt of this form is interpreted as support for the proposal.

3. The Proposing Department must address any concerns raised by the consulted department. This response must be in writing and will be included in the proposal following the original consultation form.

The following programs/codes (checksheets) have been identified as being affected by the changes in this proposal (Contact FSUCurriculum@ferris.edu for this list):

International StudiesECON 451 outcomes are changing – no change to the checksheet

ISTD-MNR

Department: **AS - SBSC - Social & Behavioral Sciences**

Administrator: Meral Topcu

Date Received: _____ Date Returned: _____

Signature: _____

Based upon department faculty review on: _____ (Date)

- We: Support the above proposal and authorizes updates to the checksheet(s) listed above.
- Support the above proposal with the modifications and concerns listed below and authorizes updates to the checksheet(s) listed above.
- Do not support the proposal for the reasons listed below and will submit a curriculum proposal to correct the checksheet(s) listed above as a result of these changes, if fully approved.

Comment Regarding the Impact this proposal has on current curriculum including prerequisites, scheduling, room assignments, and or/faculty load for your department. Use additional pages, if necessary:

CONSULTATION FORM

Form B

Form current on 12/12/18

Proposal Number: 19-051

Proposal Title: Economics (ECON) Minor Revision

Proposer: Mark Brandy Department: **MGMT - Management**

Contact Person's Name: Mark Brandy Phone: 231-591-2433

Instructions: To be completed by each department affected by the proposed change, addition, or deletion. Potential duplication of coursework is reason for consultation.

1. This completed form must be forwarded with the proposal to the administrator of the department to be consulted.
2. The department must respond within 10 business days of receipt of this form to insure inclusion in the final proposal. The completed original is returned to the Academic Senate Office to be inserted into the proposal and a copy is returned to the initiator.

The department must acknowledge receipt of this form and the proposal in writing to the initiator.

Failure to respond by 10 business days of receipt of this form is interpreted as support for the proposal.

3. The Proposing Department must address any concerns raised by the consulted department. This response must be in writing and will be included in the proposal following the original consultation form.

The following programs/codes (checksheets) have been identified as being affected by the changes in this proposal (Contact FSUCurriculum@ferris.edu for this list):

ECON 321 and ECON 451 outcomes are changing – no change to the checksheet BSN conc (2284)

Department: **HP - SNUR - School of Nursing**

Administrator: Susan Owens

Date Received: _____ Date Returned: _____

Signature: _____

Based upon department faculty review on: _____ (Date)

- We: Support the above proposal and authorizes updates to the checksheet(s) listed above.
- Support the above proposal with the modifications and concerns listed below and authorizes updates to the checksheet(s) listed above.
- Do not support the proposal for the reasons listed below and will submit a curriculum proposal to correct the checksheet(s) listed above as a result of these changes, if fully approved.

Comment Regarding the Impact this proposal has on current curriculum including prerequisites, scheduling, room assignments, and or/faculty load for your department. Use additional pages, if necessary:

CONSULTATION FORM

Form B

Form current on 12/12/18

Proposal Number: 19-051

Proposal Title: Economics (ECON) Minor Revision

Proposer: Mark Brandy Department: **MGMT - Management**

Contact Person's Name: Mark Brandy Phone: 231-591-2433

Instructions: To be completed by each department affected by the proposed change, addition, or deletion. Potential duplication of coursework is reason for consultation.

1. This completed form must be forwarded with the proposal to the administrator of the department to be consulted.
2. The department must respond within 10 business days of receipt of this form to insure inclusion in the final proposal. The completed original is returned to the Academic Senate Office to be inserted into the proposal and a copy is returned to the initiator.

The department must acknowledge receipt of this form and the proposal in writing to the initiator.

Failure to respond by 10 business days of receipt of this form is interpreted as support for the proposal.

3. The Proposing Department must address any concerns raised by the consulted department. This response must be in writing and will be included in the proposal following the original consultation form.

The following programs/codes (checksheets) have been identified as being affected by the changes in this proposal

(Contact FSUCurriculum@ferris.edu for this list):

STQM 322 Added to Econ Minor

Department: **BU- MKTG- Marketing**

Administrator: Jeff Ek

Date Received: _____ Date Returned: _____

Signature: _____

Based upon department faculty review on: _____ (Date)

- We: Support the above proposal and authorizes updates to the checksheet(s) listed above.
- Support the above proposal with the modifications and concerns listed below and authorizes updates to the checksheet(s) listed above.
- Do not support the proposal for the reasons listed below and will submit a curriculum proposal to correct the checksheet(s) listed above as a result of these changes, if fully approved.

Comment Regarding the Impact this proposal has on current curriculum including prerequisites, scheduling, room assignments, and or/faculty load for your department. Use additional pages, if necessary:

Student Name: _____

Student ID: _____

Prerequisites shown in parenthesis

REQUIRED COURSES – 6 Credits Required			Crs.	Gr.
ECON	221	Principles of Macroeconomics (MATH 109 or 110 w/ C- or higher or MATH 114, 115, 116, 117, 118, 119, 120, 122, 126 or MATH ACT 19 or SAT 500)	3	
ECON	222	Principles of Microeconomics (ECON 221)	3	
ELECTIVES – 12 Credits Required				
CHOOSE FOUR	ECON 303	Economy of European Union (ECON 222)	3	
	ECON 305	Intermediate Macroeconomic Theory (ECON 222)	3	
	ECON 306	Intermediate Microeconomics Theory (ECON 222)	3	
	ECON 321	Money and Banking (ECON 222)	3	
	ECON 331	Labor Economic Labor Relations (ECON 222)	3	
	MGMT 355	Managerial Economics (ECON 222 and MGMT 301)	3	
	ECON 431	Economics of Public Finance (ECON 222)	3	
	ECON 451	International Economics (ECON 222)	3	

DECLARATION OF MINOR

In addition to their major the student must declare the minor with the advisor Dr. Mark Brandly, (231) 591-2433, BUS 370 or Dr. Jennifer Dirmeyer, (231) 591-3147, BUS 335.

STUDENT Signature _____

Date _____

MINOR ADVISOR Signature _____

Date _____

DEPARTMENT HEAD/CHAIR Signature _____

Date _____

ADMISSION REQUIREMENTS

Any person who is admitted to a Ferris State University Bachelor's degree program is welcome to obtain this minor.

ADDITIONAL GRADUATION REQUIREMENTS

- At least one-half of the credits must be Ferris State University credits.
- A maximum of 1/3 of the credits, but no more than 7 credits, may overlap with the student's major.
- A minimum of fifty percent (50%) of the courses in the minor must be at the 200 or above level.
- A 2.00 GPA is required for completion of the Minor.
- A term prior to completion of the Minor, the student will log into MyFSU, and complete the "Apply for Graduation". You will receive an email back with the next steps to take. Once this is done the Graduation Secretary will notify the Registrar who will note the completion of the Minor.

NOTICE: Students who return to the university after an interrupted enrollment (not including summer semester) must normally meet the requirements of the curriculum, which are in effect at the time of their return, not the requirements which were in effect when they were originally admitted.

ECONOMICS (ECON) – 18 CREDITS

PROPOSED CHECKSHEET

2019-2020

Minor

College of Business

Student Name	Student ID

ALL MINOR REQUIREMENTS 18 CREDITS REQUIRED

(Prerequisites are shown in parentheses)

MINOR COURSES – 6 CREDITS REQUIRED

Prefix	Code	Course Title	Credits	Grade
ECON	221	Principles of Macroeconomics (MATH 109 or 110 with C- or higher or MATH 114, 115, 116, 117, 118, 119, 120, 122, or 126 or Math ACT 19 or (Pre-2016) Math SAT 460 or (Post-2016) Math SAT 500)	3	
ECON	222	Principles of Microeconomics (ECON 221)	3	

ELECTIVES – 12 CREDITS REQUIRED

CHOOSE 4 OF 10	ECON 303	Economy of European Union (ECON 222)	3	
	ECON 305	Intermediate Macroeconomic Theory (ECON 222)	3	
	ECON 306	Intermediate Microeconomics Theory (ECON 222)	3	
	ECON 321	Money and Banking (ECON 222)	3	
	ECON 331	Labor Economic Labor Relations (ECON 222)	3	
	MGMT 355	Managerial Economics (ECON 222 and MGMT 301)	3	
	ECON 431	Economics of Public Finance (ECON 222)	3	
	ECON 440	Health Economics (ECON 222)	3	
	ECON 451	International Economics (ECON 222)	3	
	ECON 460	Law and Economics (ECON 222)	3	
	STQM 322	Inferential Statistics (STQM 260 with C- or higher)	3	

NOTES

- Students who return to the university after an interrupted enrollment (not including summer semester) must normally meet the requirements of the curriculum which are in effect at the time of their return, not the requirements which were in effect when they were originally admitted.

ADMISSION REQUIREMENTS
New Students

- Student must be admitted to the university and pursuing a baccalaureate degree.

Transfer Students

- Student must be admitted to the university and pursuing a baccalaureate degree.

GRADUATION REQUIREMENTS

In addition to meeting all the programmatic requirements, students must:

1. Maintain a 2.00 or higher cumulative FSU GPA.
2. Earn 50% of the minor credits from FSU (Residency).
3. Earn a maximum of 1/3 credits, but no more than 7 credits, that overlap with their major.
4. Earn 50% of the credits at the 200 level or higher.
5. A term prior to completion of the minor, log into MyFSU, and complete the "Apply for Graduation". You will receive an email back with the next steps to take. Once this is done the Graduation Secretary will notify the Registrar who will note the completion of the minor.

CONTACT INFORMATION

COLLEGE: College of Business

DEPARTMENT/SCHOOL: MGMT/College of Business

PHONE: 231-591-2427

EMAIL: mgmt@ferris.edu

This checksheet contains a watermark declaring it an official document of Ferris State University. The Academic Affairs Provost's Office maintains the official checksheet repository and only the checksheets within this repository should be used at the institution.

DECLARATION OF MINOR

Role	Signature	Date
Student		
Minor Advisor		
Department Head/Chair		

Course Information Form

I. ACTION:

CREATE, MODIFY, DELETE, OR Update TracDat
Desired Term Effective: 201908

II. COURSE IDENTIFICATION: ECON 303, Economy of the European Union

If deleting a course STOP HERE.

III. COURSE DATA - TO MODIFY, INDICATE THE LETTER(S) OF ALL CHANGES (A-R): _____

ONLY complete the fields that are proposing changes.

- A. Course Title (30 Characters) _____
- B. Contact Hours: Lab: ▼ Lecture: ▼ Seminar: ▼
- C. If not LEC/LAB/SEM, Choose from drop down [See Definitions in Appendix E]: ▼
- D. College Code: ▼
- E. Department Code: ▼
- F. Credit Hours - Fixed: ▼
Credit Hours – Variable (numeric range): _____
- G. Hours may be repeated for additional credit: ▼
If yes, max times repeated _____ OR max credits awarded _____
- H. Levels: ▼
- I. Grade Method: ▼
- J. Does the proposed course replace an equivalent course? ▼
If yes, enter equivalent course: *Course Prefix, Course Number – Course Title*
- K. Term(s) Offered: _____
- L. Max Section Enrollment: _____
- M. Pre-requisite Course(s) AND minimum grade requirement in parenthesis for each course. If left blank default will be D- and if more than one course, use "AND" or "OR" to separate: _____
- N. Other Pre-requisites or restrictions: _____
- O. Co-requisite: _____
- P. Course/Catalog Description (125 words)
 - i. Current Description: _____
 - ii. Proposed Description: _____
- Q. Course Outcomes and Assessment Plan
 - i. Current Outcomes/Assessment: _____
 - ii. Proposed Outcomes/Assessment: _____
- R. Course Outline including Time Allocation
 - i. Current Outline & Time Allocation: _____
 - ii. Proposed Outline & Time Allocation: _____

UCC Chair Signature & Date:

Academic Affairs Approval Signature & Date:

OFFICE OF THE REGISTRAR USE ONLY

Date Rec'd: _____

Date Completed: _____

Entered: SCACRSE, SCADETL, SCARRES, SCAPREQ

I. ACTION:

CREATE, MODIFY, DELETE, OR Update TracDat

Desired Term Effective: 201908

II. COURSE IDENTIFICATION: ECON 321, Money and Banking

If deleting a course STOP HERE.

III. COURSE DATA - TO MODIFY, INDICATE THE LETTER(S) OF ALL CHANGES (A-R): Q

ONLY complete the fields that are proposing changes.

- A. Course Title (30 Characters) _____
- B. Contact Hours: Lab: ▼ Lecture: ▼ Seminar: ▼
- C. If not LEC/LAB/SEM, Choose from drop down [See Definitions in Appendix E]: ▼
- D. College Code: ▼
- E. Department Code: ▼
- F. Credit Hours - Fixed: 3
Credit Hours – Variable (numeric range): _____
- G. Hours may be repeated for additional credit: Choose an item
If yes, max times repeated _____ OR max credits awarded _____
- H. Levels: ▼
- I. Grade Method: ▼
- J. Does the proposed course replace an equivalent course? ▼
If yes, enter equivalent course: Course Prefix, Course Number – Course Title
- K. Term(s) Offered: _____
- L. Max Section Enrollment: _____
- M. Pre-requisite Course(s) AND minimum grade requirement in parenthesis for each course. If left blank default will be D- and if more than one course, use "AND" or "OR" to separate: _____
- N. Other Pre-requisites or restrictions: _____
- O. Co-requisite: _____
- P. Course/Catalog Description (125 words)
i. Current Description: _____
ii. Proposed Description: _____
- Q. Course Outcomes and Assessment Plan
i. Current Outcomes/Assessment: 1. The student will be able to identify the key function of financial intermediaries.
2. The student will be able to identify the agencies that regulate the financial intermediaries and their functions.
3. The student will be able to recognize the major events in the history of central banking in the United States.
4. The student will be able to distinguish the tools of monetary policy used by the Federal Reserve System.
5. The student will be able to distinguish the short run and long run effects of monetary policy.

ii. Proposed Outcomes/Assessment: 1. The student will be able to identify the key functions of financial intermediaries.
2. The student will be able to identify the structure and functions of the Federal Reserve System.
3. The student will be able to identify the monetary policy tools used by the Federal Reserve System.
4. The student will be able to distinguish between competing theories regarding the efficacy of monetary policy.
- R. Course Outline including Time Allocation
i. Current Outline & Time Allocation: _____

ii. Proposed Outline & Time Allocation:

Financial Markets, 10 hours

Monetary theory, 8 hours

Free Banking vs. Central Banking, 9 hours

Institutional considerations – The Federal Reserve System, 7 hours

Federal Reserve monetary policies, 11 hours

Total hours: 45

UCC Chair Signature & Date:

Academic Affairs Approval Signature & Date:

OFFICE OF THE REGISTRAR USE ONLY

Date Rec'd: _____ Date Completed: _____ Entered: SCACRSE, SCADETL, SCARRES, SCAPREQ

I. ACTION:

CREATE, MODIFY, DELETE, OR Update TracDat

Desired Term Effective: 201908

II. COURSE IDENTIFICATION: ECON 440 – Health Economics

If deleting a course STOP HERE.

III. COURSE DATA - TO MODIFY, INDICATE THE LETTER(S) OF ALL CHANGES (A-R): _____

ONLY complete the fields that are proposing changes.

A. Course Title (30 Characters) Health Economics

B. Contact Hours: Lab: ▼ Lecture: 3 Seminar: ▼

C. If not LEC/LAB/SEM, Choose from drop down [See Definitions in Appendix E]: ▼

D. College Code: BU - College of Business

E. Department Code: MGMT - Management

F. Credit Hours - Fixed: 3

Credit Hours – Variable (numeric range): _____

G. Hours may be repeated for additional credit: No

If yes, max times repeated _____ OR max credits awarded _____

H. Levels: Undergraduate

I. Grade Method: Standard Letter Grading

J. Does the proposed course replace an equivalent course? No

If yes, enter equivalent course: Course Prefix, Course Number – Course Title

K. Term(s) Offered: To be determined

L. Max Section Enrollment: 30

M. Pre-requisite Course(s) AND minimum grade requirement in parenthesis for each course. If left blank default will be D- and if more than one course, use "AND" or "OR" to separate: ECON 222

N. Other Pre-requisites or restrictions: _____

O. Co-requisite: _____

P. Course/Catalog Description (125 words)

i. Current Description: _____

ii. Proposed Description: This course is designed to build an understanding of the healthcare delivery system from an applied economics perspective. The application of these skills will be drawn from examples that illustrate the production of and demand for health and health care. As health insurance models develop, greater emphasis is being placed on individual choice and responsibility as determinants of healthcare utilization. Insurance is a major economic lever of these trends. How insurance firms are molding consumer choice and the responsibility for economic advantage will become critical to the future of healthcare in the U.S. Economic analysis is therefore pivotal to any understanding of how healthcare systems operate from both an empirical and normative aspect

Q. Course Outcomes and Assessment Plan

i. Current Outcomes/Assessment: _____

ii. Proposed Outcomes/Assessment:

1) Discuss healthcare delivery from an economic perspective

2) Recognize the role of individual choice in optimizing healthcare utilization

3) Document and describe important constructs such as provider, hospital, and insurance firm behavior

4) Select and implement appropriate economic analyses useful in both planning and evaluating the healthcare delivery system

5) Determine important economic factors that guide and motivate the discovery, development, and distribution of new drugs (pharmacoeconomics).

6) Assess the economic importance of regulation of healthcare delivery in the marketplace

R. Course Outline including Time Allocation

i. Current Outline & Time Allocation: _____

ii. Proposed Outline & Time Allocation:

1. Overview of Healthcare markets & the relevance of economic tools in Healthcare - 10 hours, 22.2%
 2. Demand for Healthcare – 10 hours, 22.2%
 3. Supply of Healthcare – 10 hours, 22.2%
 4. Public Policy and Medical Care Delivery – 15 hours, 33.3%)
- 15 weeks, 3 contact hours per week, 45 hours total

UCC Chair Signature & Date:

Academic Affairs Approval Signature & Date:

OFFICE OF THE REGISTRAR USE ONLY

Date Rec'd: _____ Date Completed: _____ Entered: SCACRSE, SCADETL, SCARRES, SCAPREQ

I. ACTION:

CREATE, MODIFY, DELETE, OR Update TracDat

Desired Term Effective: 201908

II. COURSE IDENTIFICATION: ECON 451, International Economics

If deleting a course STOP HERE.

III. COURSE DATA - TO MODIFY, INDICATE THE LETTER(S) OF ALL CHANGES (A-R): Q

ONLY complete the fields that are proposing changes.

A. Course Title (30 Characters) _____

B. Contact Hours: Lab: ▼ Lecture: ▼ Seminar: ▼

C. If not LEC/LAB/SEM, Choose from drop down [See Definitions in Appendix E]: ▼

D. College Code: ▼

E. Department Code: ▼

F. Credit Hours - Fixed: ▼

Credit Hours – Variable (numeric range): _____

G. Hours may be repeated for additional credit: Choose an item

If yes, max times repeated _____ OR max credits awarded _____

H. Levels: ▼

I. Grade Method: ▼

J. Does the proposed course replace an equivalent course? ▼

If yes, enter equivalent course: Course Prefix, Course Number – Course Title

K. Term(s) Offered: _____

L. Max Section Enrollment: _____

M. Pre-requisite Course(s) AND minimum grade requirement in parenthesis for each course. If left blank default will be D- and if more than one course, use "AND" or "OR" to separate: _____

N. Other Pre-requisites or restrictions: _____

O. Co-requisite: _____

P. Course/Catalog Description (125 words)

i. Current Description: _____

ii. Proposed Description: _____

Q. Course Outcomes and Assessment Plan

i. Current Outcomes/Assessment:

1. Explain how free trade policies affect various industries.
2. Explain how protectionist policies affect various industries.
3. Explain how international monetary policy affects international trade.
4. The student will be able to compare and contrast flexible and fixed exchange rate regimes and how each regime affects trade, monetary, and fiscal policies.
5. The student will be able to use the Heckscher-Ohlin theorem to demonstrate the gains from trade.

ii. Proposed Outcomes/Assessment:

1. The student will be able to analyze the gains from trade using the Theory of Comparative Advantage.
2. The student will be able to analyze the history of international trade and finance institutions and agreements as well as regulation.

- 3. Analyze for small and large open economies the effects of tariffs, quotas, and subsidies.
- 4. Compare and contrast fixed and flexible exchange rate regimes to understand the market for currency.
- 5. Analyze for small and large open economies the effects of fiscal and monetary policies using the IS-LM-FX model.

R. Course Outline including Time Allocation

- i. Current Outline & Time Allocation: _____
- ii. Proposed Outline & Time Allocation: _____

UCC Chair Signature & Date:

Academic Affairs Approval Signature & Date:

OFFICE OF THE REGISTRAR USE ONLY

Date Rec'd: _____ Date Completed: _____ Entered: SCACRSE, SCADETL, SCARRES, SCAPREQ

I. ACTION:

CREATE, MODIFY, DELETE, OR Update TracDat

Desired Term Effective: 201908

II. COURSE IDENTIFICATION: ECON 460 – Law and Economics

If deleting a course STOP HERE.

III. COURSE DATA - TO MODIFY, INDICATE THE LETTER(S) OF ALL CHANGES (A-R): _____

ONLY complete the fields that are proposing changes.

A. Course Title (30 Characters) Law and Economics

B. Contact Hours: Lab: ▼ Lecture: 3 Seminar: ▼

C. If not LEC/LAB/SEM, Choose from drop down [See Definitions in Appendix E]: ▼

D. College Code: BU - College of Business

E. Department Code: MGMT - Management

F. Credit Hours - Fixed: 3

Credit Hours – Variable (numeric range): _____

G. Hours may be repeated for additional credit: No

If yes, max times repeated _____ OR max credits awarded _____

H. Levels: Undergraduate

I. Grade Method: Standard Letter Grading

J. Does the proposed course replace an equivalent course? No

If yes, enter equivalent course: Course Prefix, Course Number – Course Title

K. Term(s) Offered: to be determined

L. Max Section Enrollment: 30

M. Pre-requisite Course(s) AND minimum grade requirement in parenthesis for each course. If left blank default will be D- and if more than one course, use "AND" or "OR" to separate: ECON 222

N. Other Pre-requisites or restrictions: _____

O. Co-requisite: _____

P. Course/Catalog Description (125 words)

i. Current Description: _____

ii. Proposed Description:

This course will provide students with a set of economic tools that can be used to analyze laws, policies, and legal systems. The application of these tools will be drawn from examples of constitutional, criminal, and civil law. Using economics, students will learn to understand the impact that laws have on decision-making and to predict the social outcomes of various laws and legal structures. .

Q. Course Outcomes and Assessment Plan

i. Current Outcomes/Assessment: _____

ii. Proposed Outcomes/Assessment:

- 1) Students will be able to use the concepts of Pareto and Kaldor-Hicks efficiency to analyze the social welfare impacts of laws and legal structures.
- 2) Students will be able to use the Coase theorem and externalities (positive and negative) theory to analyze property rights assignments.
- 3) Students will be able to use expected utility theory to evaluate the impact of criminal law.
- 4) Students will be able to use expected utility theory to evaluate the impact of different tort law systems.

R. Course Outline including Time Allocation

i. Current Outline & Time Allocation: _____

ii. Proposed Outline & Time Allocation:

Argumentation – 4 hours, 8.9%

Rule of law – 5 hours, 11.1%

Property – 9 hours, 20%

Contracts – 9 hours, 20%

Torts – 9 hours, 20%
Crime – 9 hours, 20%
15 weeks, 3 contact hours per week, 45 hours total

UCC Chair Signature & Date:

Academic Affairs Approval Signature & Date:

OFFICE OF THE REGISTRAR USE ONLY

Date Rec'd: _____ Date Completed: _____ Entered: SCACRSE, SCADETL, SCARRES, SCAPREQ

CONSULTATION FORM

Form B

Form current on 12/12/18

Proposal Number: 19-051

Proposal Title: Economics (ECON) Minor Revision

Proposer: Mark Brandy Department: **MGMT - Management**

Contact Person's Name: Mark Brandy Phone: 231-591-2433

Instructions: To be completed by each department affected by the proposed change, addition, or deletion. Potential duplication of coursework is reason for consultation.

1. This completed form must be forwarded with the proposal to the administrator of the department to be consulted.
2. The department must respond within 10 business days of receipt of this form to insure inclusion in the final proposal. The completed original is returned to the Academic Senate Office to be inserted into the proposal and a copy is returned to the initiator.

The department must acknowledge receipt of this form and the proposal in writing to the initiator.

Failure to respond by 10 business days of receipt of this form is interpreted as support for the proposal.

3. The Proposing Department must address any concerns raised by the consulted department. This response must be in writing and will be included in the proposal following the original consultation form.

The following programs/codes (checksheets) have been identified as being affected by the changes in this proposal

(Contact FSUCurriculum@ferris.edu for this list):

STQM 322 Added to Econ Minor

Department: **BU- MKTG- Marketing**

Administrator: Jeff Ek

Date Received: _____ Date Returned: _____

Signature: _____

Based upon department faculty review on: _____ (Date)

- We: Support the above proposal and authorizes updates to the checksheet(s) listed above.
- Support the above proposal with the modifications and concerns listed below and authorizes updates to the checksheet(s) listed above.
- Do not support the proposal for the reasons listed below and will submit a curriculum proposal to correct the checksheet(s) listed above as a result of these changes, if fully approved.

Comment Regarding the Impact this proposal has on current curriculum including prerequisites, scheduling, room assignments, and or/faculty load for your department. Use additional pages, if necessary:

FLITE SERVICES FORM

Form C
Effective Fall 2018

Proposal Number: 19-051

Proposal Title: Economics Minor (ECON) Update

Proposer: Mark Brandly

Proposer's Department: **MGMT - Management**

Contact Person's Name: Mark Brandly Phone: 231-591-2443

Projected number of students per year affected by proposed change: _____

Include a copy of the proposal when submitting this form to FLITE.

Sent on 5-8-19 for Consultation to the Liaison Librarian: **David Scott**

1. To be completed by the liaison librarian and approved by the Dean of FLITE.
2. FLITE must return the original form to the Academic Senate office to be inserted in the proposal and a copy to the initiator.
3. FLITE must respond within 10 business days of receipt of this form to insure that the form is included in the final proposal. **Failure to respond by 10 business days of receipt of this form is interpreted as support for the proposal.**

Liaison Librarian Reviewer: _____

Dean of FLITE Signature: _____

Based upon our review on 5/8/19 (Date), FLITE concludes that:

- Library resources to support the proposed curriculum change are currently available.
- Additional Library resources are needed but can be obtained from current funds.
- Support, but significant additional Library funds/resources are required in the amount of \$
- Does not support the proposal for reasons listed below.

Comment regarding the impact this proposal will have on library resources, collection development, or other FLITE programs. Use additional pages if necessary: _____

Course Information Form

Form EF

Effective Fall 2018

I. ACTION:

CREATE, MODIFY, DELETE, OR Update TracDat

Desired Term Effective: 202001

II. COURSE IDENTIFICATION: ECON 321, Money and Banking

If deleting a course STOP HERE.

III. COURSE DATA - TO MODIFY, INDICATE THE LETTER(S) OF ALL CHANGES (A-R): Q

ONLY complete the fields that are proposing changes.

IV. Course Title (30 Characters) _____

V. Contact Hours: Lab: ▼ Lecture: Lecture Seminar: ▼

VI. If not LEC/LAB/SEM, Choose from drop down [See Definitions in Appendix E]: ▼

VII. College Code: BU – College of Business

VIII. Department Code: MGMT – Management

IX. Credit Hours - Fixed: 3

Credit Hours – Variable (numeric range): _____

X. Hours may be repeated for additional credit: No

If yes, max times repeated _____ OR max credits awarded _____

XI. Levels: Undergraduate

XII. Grade Method: Standard Letter Grading

XIII. Does the proposed course replace an equivalent course? No

If yes, enter equivalent course: Course Prefix, Course Number – Course Title

XIV. Term(s) Offered: _____ To Be Determined _____

XV. Max Section Enrollment: 40

XVI. Pre-requisite Course(s) AND minimum grade requirement in parenthesis for each course. If left blank default will be D- and if more than one course, use "AND" or "OR" to separate: _____

XVII. Other Pre-requisites or restrictions: _____

XVIII. Co-requisite: _____

XIX. Course/Catalog Description (125 words)

i. Current Description: _____

ii. Proposed Description: _____

XX. Course Outcomes and Assessment Plan

Upon completion of this course, students will know, be able to do, or be able to demonstrate the following:

1. Describe the economic purposes and attributes of money; explain the composition of various monetary aggregates; apply marginal analysis to explain and predict fluctuations in the observed purchasing power of money
2. Summarize the equation of exchange and apply monetarist theory to discuss the relationship between money growth, the inflation rate, and real output growth
3. Articulate at least two theories that explain the payment of interest; discuss the yield curve and explain its "normal" shape; use present and future value formulas to calculate values of assets and financial instruments
4. Explain the basic business model of deposit banking and use a T-account to arrange and analyze a bank's asset-liability structure; assess major costs and benefits of fractional reserve banking and compare its potential positive and negative effects on the economy
5. Explain the rationale of central banks and the Federal Reserve and discuss various tools and targets by which the Federal Reserve attempts to achieve macroeconomic stability; compare, critique, and evaluate major macroeconomic theories with respect to their views on the role of money and financial markets in economic fluctuations.

Due to space Constrains, assessment plan is described on next page**

R. Course Outline including Time Allocation

i. Current Outline & Time Allocation: _____

ii. Proposed Outline & Time Allocation:

Financial Markets, 10 hours

Monetary theory, 8 hours

Free Banking vs. Central Banking, 9 hours

Institutional considerations – The Federal Reserve System, 7 hours

Federal Reserve monetary policies, 11 hours

Total hours: 45

UCC Chair Signature & Date:

Academic Affairs Approval Signature & Date:

OFFICE OF THE REGISTRAR USE ONLY

Date Rec'd: _____ Date Completed: _____ Entered: SCACRSE, SCADETL, SCARRES, SCAPREQ

Assessment Plan

Assessment Method for all outcomes:

Students will complete written exam essay questions demonstrating competency in each learning outcome. Instructor will apply comprehensive rubric to evaluate student competency in applying appropriate analytical tools to selected topics.

Assessment Method Category:

Test- internal

Criterion for Success:

Students will average 70% on selected questions

Course Information Form

Form EF

Effective Fall 2018

I. ACTION:

CREATE, MODIFY, DELETE, OR Update TracDat

Desired Term Effective: 202001

II. COURSE IDENTIFICATION: ECON 440 – Health Economics

If deleting a course STOP HERE.

III. COURSE DATA - TO MODIFY, INDICATE THE LETTER(S) OF ALL CHANGES (A-R): _____

ONLY complete the fields that are proposing changes.

A. Course Title (30 Characters) Health Economics

B. Contact Hours: Lab: ▼ Lecture: Lecture Seminar: ▼

C. If not LEC/LAB/SEM, Choose from drop down [See Definitions in Appendix E]: ▼

D. College Code: BU - College of Business

E. Department Code: MGMT - Management

F. Credit Hours - Fixed: 3

Credit Hours – Variable (numeric range): _____

G. Hours may be repeated for additional credit: No

If yes, max times repeated _____ OR max credits awarded _____

H. Levels: Undergraduate

I. Grade Method: Standard Letter Grading

J. Does the proposed course replace an equivalent course? No

If yes, enter equivalent course: Course Prefix, Course Number – Course Title

K. Term(s) Offered: To be determined

L. Max Section Enrollment: 20

M. Pre-requisite Course(s) AND minimum grade requirement in parenthesis for each course. If left blank default will be D- and if more than one course, use "AND" or "OR" to separate: ECON 222

N. Other Pre-requisites or restrictions: _____

O. Co-requisite: _____

P. Course/Catalog Description (125 words)

i. Current Description: _____

ii. Proposed Description: This course is designed to build an understanding of the healthcare delivery system from an applied economics perspective. The application of these skills will be drawn from examples that illustrate the production of and demand for health and health care. As health insurance models develop, greater emphasis is being placed on individual choice and responsibility as determinants of healthcare utilization. Insurance is a major economic lever of these trends. How insurance firms are molding consumer choice and the responsibility for economic advantage will become critical to the future of healthcare in the U.S. Economic analysis is therefore pivotal to any understanding of how healthcare systems operate from both an empirical and normative aspect

Q. Course Outcomes and Assessment Plan

i. Current Outcomes/Assessment: _____

ii. Proposed Outcomes/Assessment:

1) Analyze the healthcare delivery system using standard health economics metrics

2) Relate the rational choice model and apply it in the analysis of optimal healthcare utilization

3) Describe and analyze the impact health care laws and regulations have on hospital, insurance, and health provider firm behavior

4) Assess appropriateness of economic analyses useful in both planning and evaluating the healthcare delivery system

5) Articulate factors that guide and motivate the discovery, development, and distribution of new drugs (pharmacoeconomics) and evaluate the impact of alternative institutional arrangements on drug development

Due to space Constrains, assessment plan is described on next page*

R. Course Outline including Time Allocation

i. Current Outline & Time Allocation: _____

ii. Proposed Outline & Time Allocation:

1. Overview of Healthcare markets & the relevance of economic tools in Healthcare - 10 hours
 2. Demand for Healthcare – 10 hours
 3. Supply of Healthcare – 10 hours
 4. Public Policy and Medical Care Delivery – 15 hours
- 15 weeks, 3 contact hours per week, 45 hours total

UCC Chair Signature & Date:

Academic Affairs Approval Signature & Date:

OFFICE OF THE REGISTRAR USE ONLY

Date Rec'd: _____ Date Completed: _____ Entered: SCACRSE, SCADETL, SCARRES, SCAPREQ

Assessment Methods:

Outcome 1,2,3,5: Students will take comprehensive multiple choice midterm and final exams.

Outcome 1,2,4: Students will compose an original research paper on a topic related to one of the learning outcomes. Instructor will apply comprehensive rubric to evaluate student competency in applying appropriate analytical tools to the chosen research topic.

Assessment Method Category:

Outcome 1,2,3,5: Research paper

Outcome 1,2,4: Multiple choice exam

Criterion for Success:

Students will average 70% on exams

Students will average 70% on research paper rubric

Course Information Form

Form EF

Effective Fall 2018

I. ACTION:

CREATE, MODIFY, DELETE, OR Update TracDat

Desired Term Effective: 202001

II. COURSE IDENTIFICATION: ECON 451, International Economics

If deleting a course STOP HERE.

III. COURSE DATA - TO MODIFY, INDICATE THE LETTER(S) OF ALL CHANGES (A-R): Q

ONLY complete the fields that are proposing changes.

IV. Course Title (30 Characters) International Economics

V. Contact Hours: Lab: ▼ Lecture: Lecture Seminar: ▼

VI. If not LEC/LAB/SEM, Choose from drop down [See Definitions in Appendix E]: ▼

VII. College Code: BU – College of Business

VIII. Department Code: MGMT – Management

IX. Credit Hours - Fixed: 3

Credit Hours – Variable (numeric range): _____

X. Hours may be repeated for additional credit: Choose an item

If yes, max times repeated _____ OR max credits awarded _____

XI. Levels: Undergraduate

XII. Grade Method: Standard Letter Grading

XIII. Does the proposed course replace an equivalent course? No

If yes, enter equivalent course: Course Prefix, Course Number – Course Title

XIV. Term(s) Offered: _____ To Be Determined _____

XV. Max Section Enrollment: 40

XVI. Pre-requisite Course(s) AND minimum grade requirement in parenthesis for each course. If left blank default will be D- and if more than one course, use "AND" or "OR" to separate: _____

XVII. Other Pre-requisites or restrictions: _____

XVIII. Co-requisite: _____

XIX. Course/Catalog Description (125 words)

i. Current Description: _____

ii. Proposed Description: _____

XX. Course Outcomes and Assessment Plan

i. Current Outcomes/Assessment:

1. Explain how free trade policies affect various industries.
2. Explain how protectionist policies affect various industries.
3. Explain how international monetary policy affects international trade.
4. The student will be able to compare and contrast flexible and fixed exchange rate regimes and how each regime affects trade, monetary, and fiscal policies.
5. The student will be able to use the Heckscher-Ohlin theorem to demonstrate the gains from trade.

ii. Proposed Outcomes/Assessment:

1. The student will be able to analyze the gains from trade using the Theory of Comparative Advantage.
2. The student will be able to analyze the history of international trade and finance institutions and agreements as well as regulation.

3. Analyze for small and large open economies the effects of tariffs, quotas, and subsidies.
4. Compare and contrast fixed and flexible exchange rate regimes to understand the market for currency.
5. Analyze for small and large open economies the effects of fiscal and monetary policies using the IS-LM-FX model.

R. Course Outline including Time Allocation

- i. Current Outline & Time Allocation: N/A
- ii. Proposed Outline & Time Allocation: See below

UCC Chair Signature & Date:

Academic Affairs Approval Signature & Date:

OFFICE OF THE REGISTRAR USE ONLY		
Date Rec'd: _____	Date Completed: _____	Entered: <input type="checkbox"/> SCACRSE, <input type="checkbox"/> SCADETL, <input type="checkbox"/> SCARRES, <input type="checkbox"/> SCAPREQ

**Econ 451:
Proposed Course Timeline:**

- Comparative Advantage: 7.5 hrs.
- Free Trade Advantages: 7.5 hrs.
- Trade Restrictions: 4.5 hrs.
- Trade Institutions: 4.5 hrs.
- The Open Economy Model: 10.5 hrs.
- Exchange Rate Regimes: 10.5 hrs.
- 15 weeks, 3 contact hours per week, 45 hours total**

Assessment Plan:

Assessment Method:

To assess all learning outcomes: students will take comprehensive multiple-choice midterm and final exams. Instructor will analyze specific questions as they relate to learning outcomes.

Assessment Method Category:

Test-internal

Criterion for Success:

Students will average 70% on selected questions

Course Information Form

Form EF
Effective Fall 2018

I. ACTION:

CREATE, MODIFY, DELETE, OR Update TracDat
Desired Term Effective: 201908

II. COURSE IDENTIFICATION: ECON 460 – Law and Economics

If deleting a course STOP HERE.

III. COURSE DATA - TO MODIFY, INDICATE THE LETTER(S) OF ALL CHANGES (A-R): _____

ONLY complete the fields that are proposing changes.

- A. Course Title (30 Characters) Law and Economics
- B. Contact Hours: Lab: ▼ Lecture: 3 Seminar: ▼
- C. If not LEC/LAB/SEM, Choose from drop down [See Definitions in Appendix E]: ▼
- D. College Code: BU - College of Business
- E. Department Code: MGMT - Management
- F. Credit Hours - Fixed: 3
Credit Hours – Variable (numeric range): _____
- G. Hours may be repeated for additional credit: No
If yes, max times repeated _____ OR max credits awarded _____
- H. Levels: Undergraduate
- I. Grade Method: Standard Letter Grading
- J. Does the proposed course replace an equivalent course? No
If yes, enter equivalent course: Course Prefix, Course Number – Course Title
- K. Term(s) Offered: to be determined
- L. Max Section Enrollment: 30
- M. Pre-requisite Course(s) AND minimum grade requirement in parenthesis for each course. If left blank default will be D- and if more than one course, use "AND" or "OR" to separate: ECON 222
- N. Other Pre-requisites or restrictions: _____
- O. Co-requisite: _____
- P. Course/Catalog Description (125 words)
- Current Description: _____
 - Proposed Description:
This course will provide students with a set of economic tools that can be used to analyze laws, policies, and legal systems. The application of these tools will be drawn from examples of constitutional, criminal, and civil law. Using economics, students will learn to understand the impact that laws have on decision-making and to predict the social outcomes of various laws and legal structures. .
- Q. Course Outcomes and Assessment Plan
- Current Outcomes/Assessment: _____
 - Proposed Outcomes/Assessment:
 - 1) Apply the concepts of Pareto and Kaldor-Hicks efficiency to assess the social welfare impacts of laws and legal structures.
 - 2) Apply the Coase theorem and externalities (positive and negative) theory to analyze property rights assignments.
 - 3) Apply utility theory to evaluate the impact of criminal law.
 - 4) Apply expected utility theory to compare the impact of different tort law systems.***Due to space Constrains, assessment plan is described on next page*****
- R. Course Outline including Time Allocation
- Current Outline & Time Allocation: _____
 - Proposed Outline & Time Allocation:

Argumentation – 4 hours, 8.9%

Rule of law – 5 hours, 11.1%

Property – 9 hours, 20%

Contracts – 9 hours, 20%

Torts – 9 hours, 20%
Crime – 9 hours, 20%
15 weeks, 3 contact hours per week, 45 hours total

UCC Chair Signature & Date:

Academic Affairs Approval Signature & Date:

OFFICE OF THE REGISTRAR USE ONLY

Date Rec'd: _____ Date Completed: _____ Entered: SCACRSE, SCADETL, SCARRES, SCAPREQ

Assessment Methods:

To assess all learning outcomes: students will take comprehensive multiple choice midterm and final exams. Students will compose an original research paper on a topic related to one of the learning outcomes. Instructor will apply comprehensive rubric to evaluate student competency in applying appropriate analytical tools to the chosen research topic.

Assessment Method Category:

Research paper
Multiple choice exam

Criterion for Success:

Students will average 70% on exams
Students will average 70% on research paper rubric

CONSULTATION FORM

Form B

Form current on 12/12/18

Proposal Number: 19-051

Proposal Title: Economics (ECON) Minor Revision

Proposer: Mark Brandly Department: **MGMT - Management**

Contact Person's Name: Mark Brandly Phone: 231-591-2433

Instructions: To be completed by each department affected by the proposed change, addition, or deletion. Potential duplication of coursework is reason for consultation.

1. This completed form must be forwarded with the proposal to the administrator of the department to be consulted.
2. The department must respond within 10 business days of receipt of this form to insure inclusion in the final proposal. The completed original is returned to the Academic Senate Office to be inserted into the proposal and a copy is returned to the initiator.

The department must acknowledge receipt of this form and the proposal in writing to the initiator.

Failure to respond by 10 business days of receipt of this form is interpreted as support for the proposal.

3. The Proposing Department must address any concerns raised by the consulted department. This response must be in writing and will be included in the proposal following the original consultation form.

The following programs/codes (checksheets) have been identified as being affected by the changes in this proposal (Contact FSUCurriculum@ferris.edu for this list):

ECON 321 outcomes are changing – no change to the checksheet

GE-BU-BS (2472)ACCCFFIN

Department: **BU - AFIS - Accountancy, Finance, Info Systems**

Administrator: Larry Bajor

Date Received: 3/21/19

Date Returned: 3/21/19

Signature: Lawrence Bajor

Digitally signed by
Lawrence Bajor
Date: 2019.03.21
16:27:33 -04'00'

Based upon department faculty review on: 3/19/19 (Date)

- We: Support the above proposal and authorizes updates to the checksheet(s) listed above.
- Support the above proposal with the modifications and concerns listed below and authorizes updates to the checksheet(s) listed above.
- Do not support the proposal for the reasons listed below and will submit a curriculum proposal to correct the checksheet(s) listed above as a result of these changes, if fully approved.

Comment Regarding the Impact this proposal has on current curriculum including prerequisites, scheduling, room assignments, and or/faculty load for your department. Use additional pages, if necessary:

CONSULTATION FORM

Form B

Form current on 12/12/18

Proposal Number: 19-051

Proposal Title: Economics (ECON) Minor Revision

Proposer: Mark Brandy Department: **MGMT - Management**

Contact Person's Name: Mark Brandy Phone: 231-591-2433

Instructions: To be completed by each department affected by the proposed change, addition, or deletion. Potential duplication of coursework is reason for consultation.

1. This completed form must be forwarded with the proposal to the administrator of the department to be consulted.
2. The department must respond within 10 business days of receipt of this form to insure inclusion in the final proposal. The completed original is returned to the Academic Senate Office to be inserted into the proposal and a copy is returned to the initiator.

The department must acknowledge receipt of this form and the proposal in writing to the initiator.

Failure to respond by 10 business days of receipt of this form is interpreted as support for the proposal.

3. The Proposing Department must address any concerns raised by the consulted department. This response must be in writing and will be included in the proposal following the original consultation form.

The following programs/codes (checksheets) have been identified as being affected by the changes in this proposal (Contact FSUCurriculum@ferris.edu for this list):

International Studies ECON 451 outcomes are changing – no change to the checksheet

ISTD-MNR

Department: **AS - SBSC - Social & Behavioral Sciences**

Administrator: Meral Topcu

Date Received: _____ Date Returned: _____

Signature: _____

Based upon department faculty review on: _____ (Date)

- We: Support the above proposal and authorizes updates to the checksheet(s) listed above.
- Support the above proposal with the modifications and concerns listed below and authorizes updates to the checksheet(s) listed above.
- Do not support the proposal for the reasons listed below and will submit a curriculum proposal to correct the checksheet(s) listed above as a result of these changes, if fully approved.

Comment Regarding the Impact this proposal has on current curriculum including prerequisites, scheduling, room assignments, and or/faculty load for your department. Use additional pages, if necessary:

CONSULTATION FORM

Form B

Form current on 12/12/18

Proposal Number: 19-051

Proposal Title: Economics (ECON) Minor Revision

Proposer: Mark Brandly Department: **MGMT - Management**

Contact Person's Name: Mark Brandly Phone: 231-591-2433

Instructions: To be completed by each department affected by the proposed change, addition, or deletion. Potential duplication of coursework is reason for consultation.

1. This completed form must be forwarded with the proposal to the administrator of the department to be consulted.
2. The department must respond within 10 business days of receipt of this form to insure inclusion in the final proposal. The completed original is returned to the Academic Senate Office to be inserted into the proposal and a copy is returned to the initiator.

The department must acknowledge receipt of this form and the proposal in writing to the initiator.

Failure to respond by 10 business days of receipt of this form is interpreted as support for the proposal.

3. The Proposing Department must address any concerns raised by the consulted department. This response must be in writing and will be included in the proposal following the original consultation form.

The following programs/codes (checksheets) have been identified as being affected by the changes in this proposal (Contact FSUCurriculum@ferris.edu for this list):

ECON 321 and ECON 451 outcomes are changing – no change to the checksheet BSN conc (2284)

Department: **HP - SNUR - School of Nursing**

Administrator: Susan Owens

Date Received: 3/11/19 Date Returned: 3/11/19

Signature: _____

Based upon department faculty review on: 3/11/19 (Date)

- We: Support the above proposal and authorizes updates to the checksheet(s) listed above.
- Support the above proposal with the modifications and concerns listed below and authorizes updates to the checksheet(s) listed above.
- Do not support the proposal for the reasons listed below and will submit a curriculum proposal to correct the checksheet(s) listed above as a result of these changes, if fully approved.

Comment Regarding the Impact this proposal has on current curriculum including prerequisites, scheduling, room assignments, and or/faculty load for your department. Use additional pages, if necessary:

COB College Curriculum Meeting

4/17/19

Members present: Alex Manga, Lianne Briggs, Steve Shuiling, Elies Kouider, Emily Fransted, Jeff Ek, Sharon George

Members absent: Felix Bollou

Proposal: 19-051 – Economics Minor Update

Discussion: At the outset, the committee notes the deletion of ECON 303 in this proposal is inconsistent with the references to ECON 303 in the upcoming proposal modifying the COB core. The committee expressed concerns regarding receiving this proposal with Form A incomplete. Committee noted the following concerns regarding the proposal.

1. Regarding Form EF for ECON 321 – No assessment information is included in subsection Q. The committee is concerned regarding the use of lower order Bloom's terms in the course outcomes for a 300-level course. The Committee suggests revising the outcomes to include higher order language.
2. Regarding Form EF for ECON 440 – No assessment information is included in subsection Q. The committee is concerned regarding the use of lower order Bloom's terms in the first five of the course outcomes. The Committee suggests revising the outcomes to include higher order language.
3. Regarding Form EF for ECON 451 - No assessment information is included in subsection Q. No course outline or time allocation is included in subsection R.
4. Regarding Form EF for ECON 460 – No assessment information is included in subsection Q. The course outcome language could be streamlined by focusing on the verb 'analyze' in outcomes 1 and 2 and evaluate in outcomes 3 and 4.

Action: Alex called for a vote. Five committee members **approved the proposal with concerns** set forth in these minutes, 1 abstained.

Proposal: 19-034 – Accounting Graduate Certificate Creation

Discussion: The committee notes this proposal was reviewed and supported previously. Alex advises the proposal was revised by the RAM committee after several amendments were made and, accordingly, had to be resubmitted to the curriculum process. The committee notes the concerns it raised during the proposal's first trip through the curriculum process were addressed to the satisfaction of the committee.

Action: Alex called for a vote. Five committee members **approved the proposal**, 1 abstained.

Proposal: 19-059 – Information Security & Intelligence Program Revision

Discussion: The committee notes Form A indicates a department member supported the proposal with concerns. The committee expresses desire to review the concerns as part of its consideration of the

proposal Steve S. provides insight on issues raised at the department level. Committee noted the following concerns regarding the proposal.

1. Regarding Form A, #2 – In proposer’s item #2, the word ‘need’ should be replaced with ‘needed’ in “a lower level ‘Network Security’ course is need as a prerequisite to the” In proposer’s item #5, “ISIN” should be added to the last sentence, “[a]dding in 121 brings us to 121 credits.” Moreover, the committee calculates the total number of credits for the bachelor’s degree is 120 instead of 121 as specified in the proposal. Additionally, ECON 221 is identified as an additional course in the program in the proposed checklist, but it is not mentioned in Form A. Form A should reflect this change.
2. Regarding the proposed check sheets – Elies advises STQM 380 is no longer taught and has been replaced by another course. The committee suggests STQM 380 be removed from the proposed check sheet. The committee notes that the total number of courses/credits laid out in the Semester Layout of Courses – Excluding Summer Semesters plan is 119. This is fewer credits than set forth on Form A.
3. The committee supports the suggestion made by Amy Greene to add COMM 221 as a choice for communication competency.
4. Steve S. provides additional explanation in response to the concerns raised by Gayle Lopez in Form B, indicating that the program feels the finance pieces previously addressed by MGMT 350 are addressed in PROJ 320.
5. Regarding Form EF for DFOR 454 – The name of the course should be included in II. The course is missing the desired term effective information. No assessment information is included in subsection Q. Because this is a new course, information included in P(i) and Q(i) should be moved to the proposed sections, P(ii) and Q(ii). The committee recommends the proposer consider reworking the outcomes to simplify them and include higher order Bloom’s taxonomy language.
6. Regarding Form EF for ISIN 209 – No assessment information is included in subsection Q. The committee is concerned regarding the use of lower order Bloom’s terms in the first five of the course outcomes. The Committee suggests revising the outcomes to include higher order Bloom’s taxonomy language.
7. The committee reviewed remarks by Amy Greene regarding program admissions, but concluded admissions requirements were outside of the scope of the committee’s charge.

Action: Alex called for a vote. Five committee members **approved the proposal with concerns** set forth in these minutes, 1 abstained.

INFORMATION SECURITY AND INTELLIGENCE (ISIN) – 60 CREDITS
2020-2021

Associate of Applied Science (AAS)

PROPOSED CHECKSHEET

College of Business

Student Name	Student ID

UNIVERSITY REQUIREMENTS 22 23 CREDITS

(Course prerequisites are shown in parentheses)

FIRST YEAR SEMINAR REQUIREMENT (FSUS 100 OR EQUIVALENT)

All First-Time-In-Any-College Freshman (FTIAC's) must complete a one-credit FSUS 100 course, or its equivalent. Additional information and the definition of FTIAC for FSUS purposes can be found in the: [Ferris State University Academic Affairs FSUS Policy](#)

Prefix	Code	Course Title	Credits	Grade

UNIVERSITY GENERAL EDUCATION REQUIREMENTS

Courses in this section are required to satisfy the University General Education Requirements for an associate's degree. The University General Education requirements can be found on the: [Ferris State University General Education Requirements Webpage](#)

COMMUNICATION COMPETENCY – 6 CREDITS REQUIRED (OR THEIR EQUIVALENT)

Prefix	Code	Course Title	Credits	Grade
ENGL	150	English 1 (ENGL 074 or English ACT 14 or (Pre-2016) Reading SAT 370 or (Post-2016) ERW SAT 450 or TOEFL Internet Total Score 61 or MSU-ELT Composite 73 or IELTS Overall 5.5)	3	
ENGL	250	English 2 (ENGL 150 with C- or higher)	3	

QUANTITATIVE LITERACY COMPETENCY – 3-4 CREDITS REQUIRED (OR THEIR EQUIVALENT)

Prefix	Code	Course Title	Credits	Grade
CHOOSE 1 OF 2	MATH 114	Quantitative Reasoning for Professionals 2 ((MATH 109 or 110 with C- or higher or Math ACT 19 or (Pre-2016) Math SAT 460 or (Post-2016) Math SAT 500) and (ENGL 074 or English ACT 14 or (Pre-2016) Reading SAT 370 or (Post-2016) ERW SAT 450); if Math ACT 24 or SAT 580 or higher, student must substitute General Education Elective credits)	4	
	MATH 115	Intermediate Algebra (MATH 109 or 110 with C- or higher or Math ACT 19 or (Pre-2016) Math SAT 460 or (Post-2016) Math SAT 500; if Math ACT 24 or SAT 580 or higher, student must substitute General Education Elective credits)	3	

NATURAL SCIENCES COMPETENCY – 3 CREDITS REQUIRED

One course is required with a minimum of 3 credits: must be a lab course.

Prefix	Code	Course Title	Credits	Grade

CULTURE COMPETENCY – 6 CREDITS REQUIRED

A foreign language course is recommended.

Prefix	Code	Course Title	Credits	Grade

SELF AND SOCIETY COMPETENCY – 3 CREDITS REQUIRED

Prefix	Code	Course Title	Credits	Grade

INFORMATION SECURITY AND INTELLIGENCE (ISIN) – 60 CREDITS

Associate of Applied Science (AAS)

PROPOSED CHECKSHEET

2020-2021

College of Business

ADDITIONAL GENERAL EDUCATION REQUIREMENTS – 3 CREDITS REQUIRED

These courses are additional General Education courses to meet the requirements for this specific program.

Prefix	Code	Course Title	Credits	Grade
CHOOSE 1 OF 2	COMM 105	Interpersonal Communication (None)	3	
	COMM 121	Fundamentals of Public Speaking (None)	3	

COLLEGE REQUIREMENTS 36 CREDITS REQUIRED

(PREREQUISITES ARE SHOWN IN PARENTHESES)

MAJOR COURSES 27 CREDITS REQUIRED

Prefix	Code	Course Title	Credits	Grade
ISIN	121	Digital Security Awareness (None)	3	
ISIN	200	Secure Digital Technologies (ISIN 121 with C- or higher)	3	
STQM	260	Introduction to Statistics (MATH 114, 115, 116, 120, 126, 130, 132, or 135 with a C- or higher or Math ACT 24 or (Pre-2016) Math SAT 560 or (Post-2016) Math SAT 580)	3	
STQM	270	Introduction to Data Mining (COHP 350, MATH 251, MFGE 341, PSYC 210, SOCY 371, or STQM 260 with C- or higher)	3	
ISIN	300	Link and Visual Analysis (None)	3	
ISIN	306	Security Informatics (Sophomore Status or Instructor Permission)	3	
ISIN	308	Principles of Information Security (ISIN 200 or Instructor Permission)	3	
DFOR	310	Digital Forensics and Analysis (ISIN 121 or 308 with C or higher)	3	
ISIN	312	Applications of Information Security ((ISIN 305 or 306) and 308)	3	
ISIN	325	Database Security (Sophomore Status)	3	

ELECTIVES 9 CREDITS REQUIRED (ADVISOR APPROVAL)

Prefix	Code	Course Title	Credits	Grade
CHOOSE 3 OF 16	ISIN 209	Network Security (ISIN 200 with C- or higher)	3	
	STQM 270	Introduction to Data Mining (COHP 350, MATH 251, MFGE 341, PSYC 210, SOCY 371, or STQM 260 with C- or higher)	3	
	ISIN 301	Data Intelligence Competitive Theory (ISIN 300)	3	
	DFOR 315	Advanced Digital Forensics (DFOR 310 with C or higher)	3	
	ISIN 317	Fraud Examination (None)	3	
	PROJ 320	Project Management Fundamentals (Sophomore Status)	3	
	STQM 322	Inferential Statistics (STQM 260 with C- or higher)	3	
	ISIN 335	Pen Testing and Cloud Security (ISIN 312)	3	
	STQM 342	Data Mining Tools (STQM 270 with C or higher)	3	
	STQM 360	Risk Analysis and Strategy (STQM 260 with C- or higher)	3	
	ISIN 380	Current Issues in Information Security and Intelligence (ISIN 308)	3	
	STQM 380	Data Mining Processes (STQM 342 with C- or higher)	3	
	ISIN 429	Legal and Ethical Issues in Information Security (Sophomore Status)	3	
	ISIN 430	Pen Testing and Mobile Security (ISIN 312 and 325)	3	
DFOR 454	CyberSec Incident Response (DFOR 315)	3		
		<i>Directed Elective</i>	3	

NOTES

- Students who return to the university after an interrupted enrollment (not including summer semester) must normally meet the requirements of the curriculum which were in effect at the time of their return, not the requirements which were in effect when they were originally admitted.

INFORMATION SECURITY AND INTELLIGENCE (ISIN) – 60 CREDITS

Associate of Applied Science (AAS)

PROPOSED CHECKSHEET

2020-2021

College of Business

ADDITIONAL GENERAL EDUCATION REQUIREMENTS – 3 CREDITS REQUIRED

These courses are additional General Education courses to meet the requirements for this specific program.

Prefix	Code	Course Title	Credits	Grade
CHOOSE 1 OF 2	COMM 105	Interpersonal Communication (None)	3	
	COMM 121	Fundamentals of Public Speaking (None)	3	

COLLEGE REQUIREMENTS 36 CREDITS REQUIRED

(PREREQUISITES ARE SHOWN IN PARENTHESES)

MAJOR COURSES 27 CREDITS REQUIRED

Prefix	Code	Course Title	Credits	Grade
ISIN	121	Digital Security Awareness (None)	3	
ISIN	200	Secure Digital Technologies (ISIN 121 with C- or higher)	3	
STQM	260	Introduction to Statistics (MATH 114, 115, 116, 120, 126, 130, 132, or 135 with a C- or higher or Math ACT 24 or (Pre-2016) Math SAT 560 or (Post-2016) Math SAT 580)	3	
STQM	270	Introduction to Data Mining (COHP 350, MATH 251, MFGE 341, PSYC 210, SOCY 371, or STQM 260 with C- or higher)	3	
ISIN	300	Link and Visual Analysis (None)	3	
ISIN	306	Security Informatics (Sophomore Status or Instructor Permission)	3	
ISIN	308	Principles of Information Security (ISIN 200 or Instructor Permission)	3	
DFOR	310	Digital Forensics and Analysis (ISIN 121 or 308 with C or higher)	3	
ISIN	312	Applications of Information Security ((ISIN 305 or 306) and 308)	3	
ISIN	325	Database Security (Sophomore Status)	3	

ELECTIVES 9 CREDITS REQUIRED (ADVISOR APPROVAL)

Prefix	Code	Course Title	Credits	Grade
CHOOSE 3 OF 16	ISIN 209	Network Security (ISIN 200 with C- or higher)	3	
	STQM 270	Introduction to Data Mining (COHP 350, MATH 251, MFGE 341, PSYC 210, SOCY 371, or STQM 260 with C- or higher)	3	
	ISIN 301	Data Intelligence Competitive Theory (ISIN 300)	3	
	DFOR 315	Advanced Digital Forensics (DFOR 310 with C or higher)	3	
	ISIN 317	Fraud Examination (None)	3	
	PROJ 320	Project Management Fundamentals (Sophomore Status)	3	
	STQM 322	Inferential Statistics (STQM 260 with C- or higher)	3	
	ISIN 335	Pen Testing and Cloud Security (ISIN 312)	3	
	STQM 342	Data Mining Tools (STQM 270 with C or higher)	3	
	STQM 360	Risk Analysis and Strategy (STQM 260 with C- or higher)	3	
	ISIN 380	Current Issues in Information Security and Intelligence (ISIN 308)	3	
	STQM 380	Data Mining Processes (STQM 342 with C- or higher)	3	
	ISIN 429	Legal and Ethical Issues in Information Security (Sophomore Status)	3	
	ISIN 430	Pen Testing and Mobile Security (ISIN 312 and 325)	3	
DFOR 454	CyberSec Incident Response (DFOR 315)	3		
		<i>Directed Elective</i>	3	

NOTES

- Students who return to the university after an interrupted enrollment (not including summer semester) must normally meet the requirements of the curriculum which were in effect at the time of their return, not the requirements which were in effect when they were originally admitted.

ADMISSION REQUIREMENTS**New Students**

- Minimum 3.0 High School GPA (on a 4.0 scale)
- Minimum ACT Composite score of 22 and ACT Math score of 22 or SAT minimum Math score of 550.

Transfer Students

- Combined college or university GPA of 3.0 (on a 4.0 scale) from all institutions attended. GPA based on completion of 24 credit hours or more.
- Students must have completed the transfer equivalency of FSU's MATH 115 with a grade of C or higher or have either a minimum ACT Math score of 22 or minimum SAT Math score of 550.
- Additional requirements: All students applying for admission to the ISI program will have to submit a 750 to 1,000 word essay that addresses the following: who they are and why they desire admission to the ISI program, description of a personal quality, talent, accomplishment, contribution or experience, and a description of someone that influenced them and why.

DEGREE OUTCOMES

1. Theory and Practice - Work as a member of an information security and/or intelligence team and effectively integrate theories and practice in an ISI environment.
2. Digital Devices - Theorize ways digital devices could be used for security and criminal activity and collect and process digital information in support of an investigation or hypothesis.
3. Security Risk Analysis - Develop skills for evaluating organizational structure, environment, and planning strategies for security risk and analyze the effectiveness of a security plan against the methods used by organized crime, gangs and terrorist organizations.
4. Databases - Design, construct and maintain databases in a format consistent with data mining. Analyze these structures in a temporal manner and present findings using a variety of methods including visual analysis tools and techniques.
5. Event Analysis - Recognize the potential for multiples explanations for events and information and be able to analyze and describe the accuracy of the information.
6. Forensic Tools - Utilize digital forensic tools and encryption technology to reconstruct information and recover lost or deleted files in a variety of digital platforms and settings using appropriate methodologies
7. Networks and Devices - Set up computer networks and peripheral devices, install and maintain software; demonstrate how to handle, transport, utilize and safeguard digital devices and information.
8. ISI Lifecycle - Demonstrate knowledge of concepts and methodologies in information security and the Information Security Lifecycle (Protection) including information security administration, Security+ and CISSP.
9. Digital Forensics - Demonstrate knowledge of concepts and methodologies of incidence response, cyber forensics (acquisition, preservation, analysis, and presentation of evidence) and the information security lifecycle including cyber laws, cybercrimes, incidence response, pre-incident preparation, detection, notification, initial response, strategic decisions, response, recovery, and reporting.
10. Data Mining - Demonstrate knowledge of business intelligence and the evaluation of analytical data used in tragic decision making including knowledge discovery, tracking, managing and understanding organized data.

INFORMATION SECURITY AND INTELLIGENCE (ISIN) – 60 CREDITS

Associate of Applied Science (AAS)

PROPOSED CHECKSHEET

2020-2021

College of Business

GRADUATION REQUIREMENTSIn addition to meeting all the programmatic requirements, students must:

1. Meet University General Education requirements.
2. Earn 15 credits from FSU (Residency).
3. Maintain a 2.00 or higher cumulative FSU GPA.
4. Earn a minimum of 60 credits.

CONTACT INFORMATION

COLLEGE: College of Business

PHONE: 231-591-2434

DEPARTMENT/SCHOOL: AFIS/College of Business

EMAIL: afis@ferris.edu

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SEMESTER LAYOUT OF COURSES**FIRST YEAR**

Fall Courses		Credits	Spring Courses		Credits	Summer Courses		Credits
COMM 105 or 121		3	ENGL 250		3	Culture Competency		3
MATH 114 or 115		3-4	ISIN 200		3			
Natural Sciences Competency		3-4	Self and Society Competency		3			
ENGL 150		3	STQM 260		3			
ISIN 121		3	ISIN 300		3			
Total Credits		15-17	Total Credits		15	Total Credits		3

SECOND YEAR

Fall Courses		Credits	Spring Courses		Credits	Summer Courses		Credits
ISIN 306		3	ISIN 312		3			
ISIN 308		3	DFOR 310		3			
ISIN 325		3	Elective Course (Advisor Approval)		3			
STQM 270 Culture Competency		3	Elective Course (Advisor Approval)		3			
Elective Course (Advisor Approval)		3						
Total Credits		15	Total Credits		12	Total Credits		

CULTURE COMPETENCY – 9 CREDITS REQUIRED

Three courses are required with a minimum of 9 credits: must be from two different disciplines, have at least one 200 level or higher course, and have no more than 5 credits from Cultural Competency Activities. *A foreign language course is recommended.*

Prefix	Code	Course Title	Credits	Grade
			[200+]	

SELF AND SOCIETY COMPETENCY – 9 CREDITS REQUIRED

Three courses are required with a minimum of 9 credits: must be from two different disciplines and have at least one 200 level or higher course.

Prefix	Code	Course Title	Credits	Grade
CHOOSE 1 OF 2	ECON 221	Principles of Macroeconomics (MATH 109 or 110 with C- or higher or (MATH 114, 115, 116, 117, 118, 119, 120, 122, or 126 or Math ACT 19 or (Pre-2016) Math SAT 460 or (Post-2016) Math SAT 500))		
	ECON 222	Principles of Microeconomics (ECON 221)	3	

DIVERSITY COMPETENCY – 2 COURSES REQUIRED

If not met by courses taken for Culture, Self and Society, or Michigan Transfer Agreement (MTA), a student must have one course with the Global Diversity attribute and one course with the U.S. Diversity attribute. Some courses include both Global Diversity and U.S. Diversity attributes. Courses with both attributes satisfies the entire Diversity competency.

Prefix	Code	Course Title	Credits	Grade
			[Global Diversity]	
			[U.S. Diversity]	

COLLABORATION COMPETENCY – 2 COURSES REQUIRED

If not met by courses taken in the bachelor degree program, a student must have two courses with the Collaboration attribute. Some courses include both Collaboration and Problem Solving attributes. Of the required courses in this specific program, these courses will meet the Collaboration requirement:

- ISIN 300 - Link and Visual Analysis
- ~~MGMT 350 - Management Metrics and Decision Making~~
- MKTG 321 - Principles of Marketing
- PROJ 320 - Project Management Fundamentals

PROBLEM SOLVING COMPETENCY – 2 COURSES REQUIRED

If not met by courses taken in the bachelor degree program, a student must have two courses with the Problem Solving attribute. Some courses include both Collaboration and Problem Solving attributes. Of the required courses in this specific program, these courses will meet the Problem Solving requirement:

- ACCT 201 - Principles of Financial Accounting
- ISIN 300 - Link and Visual Analysis
- ~~MGMT 350 - Management Metrics and Decision Making~~
- MKTG 321 - Principles of Marketing
- PROJ 320 - Project Management Fundamentals

INFORMATION SECURITY AND INTELLIGENCE (ISIN) – 120 CREDITS

Bachelor of Science (BS)

PROPOSED CHECKSHEET

2020-2021

College of Business

COLLEGE REQUIREMENTS 81 CREDITS REQUIRED

(Prerequisites are shown in parentheses)

These courses are used to calculate the major 2.0 GPA requirement.

MAJOR COURSES 57 CREDITS REQUIRED

Prefix	Code	Course Title	Credits	Grade
ISIN	121	Digital Security Awareness (None)	3	
ISIN	200	Secure Digital Technologies (ISIN 121 with C- or higher)	3	
ISIN	209	Network Security (ISIN 200 with C- or higher)	3	
STQM	270	Introduction to Data Mining (COHP 350, MATH 251, MFGE 341, PSYC 210, SOCY 371, or STQM 260 with C- or higher)	3	
ISIN	300	Link and Visual Analysis (None)	3	
ISIN	301	Data Intelligence Competitive Theory (ISIN 300)	3	
ISIN	306	Security Informatics (Sophomore Status or Instructor Permission)	3	
ISIN	308	Principles of Information Security (ISIN 200 or Instructor Permission)	3	
DFOR	310	Digital Forensics and Analysis (ISIN 121 or 308 with C or higher)	3	
ISIN	312	Applications of Information Security ((ISIN 305 or 306) and ISIN 308)	3	
ISIN	317	Fraud Examination (None)	3	
PROJ	320	Project Management Fundamentals (Sophomore Status)	3	
ISIN	325	Database Security (Sophomore Status)	3	
STQM	360	Risk Analysis and Strategy (STQM 260 with C- or higher)	3	
ISIN	380	Current Issues in Information Security and Intelligence (ISIN 308)	3	
ISIN	409	Network Forensics and Analysis (ISIN 200 and 308 both with C- or higher)	3	
ISIN	429	Legal and Ethical Issues in Information Security (Sophomore Status)	3	
ISIN	491	ISI Internship (Junior Status)	3	
ISIN	499	Capstone Experience (Senior Status and Instructor Approval)	3	

BUSINESS COURSE REQUIREMENTS 12 CREDITS REQUIRED

Prefix	Code	Course Title	Credits	Grade
ACCT	201	Principles of Financial Accounting (MATH 109 or 110 with C- or higher or (MATH 114, 115, 116, 117, 118, 119, 120, 126, 130, 132, or 135 or Math ACT 19 or (Pre-2016) Math SAT 460 or (Post-2016) Math SAT 500))	3	
STQM	260	Introduction to Statistics (MATH 114, 115, 116, 120, 126, 130, 132, or 135 with C- or higher or Math ACT 24 or (Pre-2016) Math SAT 560 or (Post-2016) Math SAT 580)	3	
MGMT	301	Applied Management (None)	3	
MKTG	321	Principles of Marketing (ENGL 150 with C- or higher and Sophomore Status)	3	
MGMT	350	Management Metrics and Decision Making (None)	3	

DIRECTED ELECTIVES 5 CREDITS REQUIRED

Prefix	Code	Course Title	Credits	Grade

INFORMATION SECURITY AND INTELLIGENCE (ISIN) – 120 CREDITS

Bachelor of Science (BS)

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CONCENTRATIONS 12 CREDITS REQUIRED

(Prerequisites are shown in parentheses)

Choose one concentration below or a custom concentration may be developed. Requires advisor approval.

It is important to note that all courses and concentrations may not be available at all campuses.

DIGITAL FORENSICS AND PENETRATION TESTING CONCENTRATION (XXXX) – 12 CREDITS REQUIRED

Prefix	Code	Course Title	Credits	Grade
DFOR	315	Advanced Digital Forensics (DFOR 310 with C or higher)	3	
ISIN	335	Pen Testing and Cloud Security (ISIN 312)	3	
ISIN	430	Pen Testing and Mobile Security (ISIN 312 and 325)	3	
DFOR	454	CyberSec Incident Response (DFOR 315)	3	

DATA MINING CONCENTRATION (DTMN) – 12 CREDITS REQUIRED – AVAILABLE MAIN BIG RAPIDS CAMPUS ONLY

Prefix	Code	Course Title	Credits	Grade
STQM	322	Inferential Statistics (STQM 260 with C- or higher)	3	
ISIN	335	Pen Testing and Cloud Security (ISIN 312)	3	
STQM	342	Data Mining Tools (STQM 270 with C or higher)	3	
STQM	380	Data Mining Processes (STQM 342 with C- or higher)	3	
		Directed Elective	3	

~~DIGITAL FORENSICS CONCENTRATION (DGFN) – 12 CREDITS REQUIRED~~

Prefix	Code	Course Title	Credits	Grade
CITS	270	Network+ (CITS 160 or ISIN 200 with C or higher)	3	
DFOR	315	Advanced Digital Forensics (DFOR 310 with C or higher)	3	
ISIN	335	Pen Testing and Cloud Security (ISIN 312)	3	
		Directed Elective	3	

FOREIGN LANGUAGE CONCENTRATION (FRL) – 12 CREDITS REQUIRED

Prefix	Code	Course Title	Credits	Grade

~~PENETRATION TESTING AND SECURE SOFTWARE CONCENTRATION (PTSS) – 12 CREDITS REQUIRED~~

Prefix	Code	Course Title	Credits	Grade
DFOR	315	Advanced Digital Forensics (DFOR 310)	3	
ISIN	335	Pen Testing and Cloud Security (ISIN 312)	3	
ISIN	430	Pen Testing and Mobile Security (ISIN 312 and 325)	3	
		Directed Elective	3	

NETWORK SECURITY CONCENTRATION (NWSC) – 12 CREDITS REQUIRED

Prefix	Code	Course Title	Credits	Grade
CITS	270	Network+ (CITS 160 or ISIN 200 with C or higher)	3	
CITS	280	Linux Administration (ISYS 105 or ISYS 105 Competency or CITS 160 or ISIN 200 with C or higher)	3	
		Directed Elective	3	
		Directed Elective	3	

PROPOSED CHECKSHEET

CUSTOM CONCENTRATION (CUST) OR MINOR (ADVISOR APPROVAL) – 12 CREDITS REQUIRED

Prefix	Code	Course Title	Credits	Grade

NOTES

- Students who return to the university after an interrupted enrollment (not including summer semester) must normally meet the requirements of the curriculum which are in effect at the time of their return, not the requirements which were in effect when they were originally admitted.
- MACRO Stamp with MATH 115 and ENGL 311, 321, and 325 satisfies General Education requirements.
- Although taking classes during summer semester of your first year in the program is optional, doing so will expedite the completion of your degree.

5 YEAR BACHELOR AND MASTER OF SCIENCE IN INFORMATION SECURITY & INTELLIGENCE PROGRAM

Students may apply to the Masters of Information Security and Intelligence (MISI) program at the end of their junior year. If admitted, the student may substitute the following courses within their bachelor degree:

- MISI 629 (Legal, Ethical, and Fraud Issues) for ISIN 429 (Legal and Ethical Issues in Information Security)
- PROJ 640 (Project Management) for PROJ 320 (Project Management Fundamentals)

ADMISSION REQUIREMENTS

New Students

- Minimum 3.0 High School GPA (on a 4.0 scale)
- Minimum Composite ACT score of 22 and Math ACT score of 22 or SAT minimum Math score of 550.
- All students applying for admission to the ISI program will have to submit a 750 to 1,000-word essay that addresses the following: Who they are and why they desire admission to the ISI program, description of a personal quality, talent, accomplishment, contribution, or experience, and a description of someone that influenced them and why.

Transfer Students

- Combined college or university GPA of 3.0 (on a 4.0 scale) from all institutions attended. GPA based on completion of 24 credit hours or more.
- Completion of the transfer equivalency for FSU's MATH 115 with a grade of C or higher or have either a minimum Math ACT score of 22 or minimum Math SAT score of 550.
- All students applying for admission to the ISI program will have to submit a 750 to 1,000-word essay that addresses the following: Who they are and why they desire admission to the ISI program, description of a personal quality, talent, accomplishment, contribution, or experience, and a description of someone that influenced them and why.

DEGREE OUTCOMES

1. Theory and Practice - Work as a member of an information security and/or intelligence team and effectively integrate theories and practice in an ISI environment
2. Digital Devices - Theorize ways digital devices could be used for security and criminal activity and collect and process digital information in support of an investigation or hypothesis
3. Security Risk Analysis - Develop skills for evaluating organizational structure, environment, and planning strategies for security risk and analyze the effectiveness of a security plan against the methods used by organized crime, gangs and terrorist organizations.
4. Databases - Design, construct and maintain databases in a format consistent with data mining. Analyze these structures in a temporal manner and present findings using a variety of methods including visual analysis tools and techniques.
5. Event Analysis - Recognize the potential for multiple explanations for events and information and be able to analyze and describe the accuracy of the information.
6. Forensic Tools - Utilize digital forensic tools and encryption technology to reconstruct information and recover lost or deleted files in a variety of digital platforms and settings using appropriate methodologies.
7. Networks and Devices - Set up computer networks and peripheral devices, install and maintain software; demonstrate how to handle, transport, utilize and safeguard digital devices and information.
8. ISI Lifecycle - Demonstrate knowledge of concepts and methodologies in information security and the Information Security Lifecycle (Protection) including information security administration, Security+ and CISSP.
9. Digital Forensics Concentration - Demonstrate knowledge of concepts and methodologies of incidence response, cyber forensics (acquisition, preservation, analysis, and presentation of evidence) and the information security lifecycle including cyber laws,
10. GIS and Data Mining Concentration - Demonstrate knowledge of business intelligence and GIS data and the evaluation of analytical data used in strategic decision making including knowledge discovery, tracking, managing and understanding organized data. Students will construct GIS and data mining environments using appropriate tools, techniques, decision support systems, and emerging trends.
11. Sustainability - To be able to obtain the faculty resources for continued growth both in numbers and in locations. Currently over half of the classes taught for both graduate and undergraduate programs is being serviced by adjuncts. Adding to this problem is the fact that there is no system in place to properly integrate the adjunct into the team and to ensure they are mentored and teaching the outcomes required.

GRADUATION REQUIREMENTS**In addition to meeting all the programmatic requirements, students must:**

1. Meet University General Education requirements.
2. Earn a minimum of 120 credits.
3. Maintain a 2.00 or higher cumulative FSU GPA.
4. Earn 30 credits from FSU (Residency).
5. Earn 40 credits of 300 level or higher courses.
6. Maintain a 2.00 cumulative GPA in the major, which includes business, major, **elective**, and concentration courses.

CONTACT INFORMATION

COLLEGE: College of Business
DEPARTMENT/SCHOOL: AFIS/College of Business

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INFORMATION SECURITY AND INTELLIGENCE (ISIN) – 120 CREDITS

Bachelor of Science (BS)

PROPOSED CHECKSHEET

 2020-2021
 College of Business

SEMESTER LAYOUT OF COURSES EXCLUDING SUMMER SEMESTERS
FIRST YEAR

Fall Courses		Credits	Spring Courses		Credits	Summer Courses		Credits
COMM 105 or 121		3	ENGL 250		3			
Culture Competency		3	ISIN 200		3			
ENGL 150		3	Natural Sciences Competency		3			
ISIN 121		3	Self and Society Competency		3			
MATH 114 or 115		3-4	STQM 260		3			
Total Credits		15-16	Total Credits		15	Total Credits		

SECOND YEAR

Fall Courses		Credits	Spring Courses		Credits	Summer Courses		Credits
Culture Competency		3	ACCT 201		3			
ISIN 308		3	ISIN 300		3			
ECON 221		3	Self and Society Competency		3			
ISIN 209		3	DFOR 310		3			
ISIN 306		3	ENGL 311, 321, or 325		3			
Total Credits		15	Total Credits		15	Total Credits		

THIRD YEAR

Fall Courses		Credits	Spring Courses		Credits	Summer Courses		Credits
MGMT 301		3	ISIN 312		3			
MKTG 321		3	ISIN 409		3			
Natural Sciences Competency		4	STQM 360		3			
ISIN 325		3	ISIN 380		3			
STQM 270		3	Concentration Course 1		3			
Total Credits		16	Total Credits		15	Total Credits		

FOURTH YEAR

Fall Courses		Credits	Spring Courses		Credits	Summer Courses		Credits
Culture Competency 200+		3	ISIN 499		3			
Concentration Course 2		3	ISIN 429 or MISI 629		3			
Concentration Course 3		3	PROJ 320 or 640		3			
ISIN 301		3	Concentration Course 4		3			
ISIN 317		3						
Total Credits		15	Total Credits		12	Total Credits		

INFORMATION SECURITY AND INTELLIGENCE (ISIN) – 120 CREDITS

Bachelor of Science (BS)

PROPOSED CHECKSHEET

2020-2021
College of Business**SEMESTER LAYOUT OF COURSES INCLUDING SUMMER SEMESTERS****FIRST YEAR**

Fall Courses		Credits	Spring Courses		Credits	Summer Courses		Credits
Culture Competency		3	Self and Society Competency		3	ISIN 306		3
ENGL 150		3	ENGL 250		3	ISIN 317		3
ISIN 121		3	ISIN 200		3			
COMM 121 or 105		3	Natural Sciences Competency		3			
MATH 114 or 115		3-4	STQM 260		3			
Total Credits		15-16	Total Credits		15	Total Credits		6

SECOND YEAR

Fall Courses		Credits	Spring Courses		Credits	Summer Courses		Credits
Self and Society Competency		3	ACCT 201		3	ISIN 300		3
ISIN 308		3	Culture Competency 200+		3	STQM 360		3
ECON 221		3	ISIN 301		3			
ISIN 209		3	DFOR 310		3			
ENGL 311, 321, or 325		3	ISIN 380		3			
Total Credits		15	Total Credits		15	Total Credits		6

THIRD YEAR

Fall Courses		Credits	Spring Courses		Credits	Summer Courses		Credits
MGMT 301		3	ISIN 312		3	ISIN 491		3
MKTG 321		3	ISIN 409		3	ISIN 325		3
Natural Sciences Competency		4	Concentration Course 1		3			
Culture Competency		3	ISIN 429 or MISI 629		3			
STQM 270		3	Concentration Course 2		3			
Total Credits		16	Total Credits		15	Total Credits		6

FOURTH YEAR

Fall Courses		Credits	Spring Courses		Credits	Summer Courses		Credits
ISIN 499		3						
PROJ 320 or 640		3						
Concentration Course 3		3						
Concentration Course 4		3						
Total Credits		12	Total Credits			Total Credits		

Course Information Form

Form EF

Form current on 12/10/18

I. ACTION:

CREATE, MODIFY, DELETE, OR Update Assessment Software

Desired Term Effective: 201908

II. COURSE IDENTIFICATION (Current): DFOR 454-Cyber Incident Response

If deleting a course STOP HERE.

III. COURSE DATA - TO MODIFY, INDICATE THE LETTER(S) OF ALL CHANGES (A-R): _____

ONLY complete the fields that are proposing changes.

A. Course Title (30 Characters) Cybersec Incident Response

B. Contact Hours: Lab: 0 Lecture: 3 Seminar: ▼

C. If not LEC/LAB/SEM, Choose from drop down [See Definitions in Appendix E]: ▼

D. College Code: BU - College of Business

E. Department Code: AFIS - Account, Finance, Info Systems

F. Credit Hours - Fixed: 3

Credit Hours – Variable (numeric range): _____

G. Hours may be repeated for additional credit: No

If yes, max times repeated _____ OR max credits awarded _____

H. Levels: Undergraduate

I. Grade Method: Standard Letter Grading

J. Does the proposed course replace an equivalent course? No

If yes, enter equivalent course: Course Prefix, Course Number – Course Title

K. Term(s) Offered: All

L. Max Section Enrollment: 20

M. Pre-requisite Course(s) AND minimum grade requirement in parenthesis for each course. If left blank default will be D- and if more than one course, use "AND" or "OR" to separate: DFOR 315

N. Other Pre-requisites or restrictions: _____

O. Co-requisite: _____

P. Course/Catalog Description (125 words)

i. Current Description: .

ii. Proposed Description: Continued Education in digital forensics and Incident response, diving deeper in techniques learned from DFOR 310 and DFOR 315. This course will focus on key elements such as the forensic analysis of databases, further understanding of file systems, cloud forensics, malware forensics, network forensics, current topics in forensics, and proper incident reporting techniques.

Q. Course Outcomes and Assessment Plan

i. Current Outcomes/Assessment:

ii. Proposed Outcomes/Assessment: Demonstrate ability to develop appropriate incident response plan after evaluation of intrusion and/or digital crime through creation of incident response plan based on real life scenario.

2. Perform proper extraction and forensic imaging of mobile devices, hard disks, and servers to international forensic standards. Evaluate extractions through hash evaluation documentation of activity.

3. Demonstrate ability to perform analysis of forensic images based on Incident scenarios and incident acquisitions. Evaluate analysis reports based on international standard.

4. Apply proper analysis and demonstrate ability to report incident findings in report form by creating analysis report showing comprehension of all outcomes in a practical examination of final forensic report.

5. Evaluate all knowledge through comprehensive examination at the end of course.

R. Course Outline including Time Allocation

i. Current Outline & Time Allocation: _____

ii. Proposed Outline & Time Allocation:

Incident Response and Planning 30%

1- Incident Response Planning

2- Fundamentals of Incident Response, terminology, process, and digital evidence collection

Forensic imaging 20%

1. Fundamentals of forensic imaging

2. Understanding process of the international standard of forensic imaging of multiple platforms

Analysis and Reporting 50%

1. Continued analysis practices for digital analysis of multiple platforms to include mobile, databases, and servers.

2. Fundamentals of forensic reporting and analysis reporting to international standard

UCC Chair Signature & Date:

Academic Affairs Approval Signature & Date:

OFFICE OF THE REGISTRAR USE ONLY

Date Rec'd:

Date Completed:

Entered: SCACRSE, SCADETL, SCARRES, SCAPREQ

CONSULTATION FORM

Form B

Form current on 12/12/18

Proposal Number: 19-059

Proposal Title: Information Security & Intelligence (ISIN) Program Revision

Proposer: Jim Furstenberg Department: **AFIS - Account, Finance, Info Systems**

Contact Person's Name: Jim Furstenberg Phone: 231-591-5335

Instructions: To be completed by each department affected by the proposed change, addition, or deletion. Potential duplication of coursework is reason for consultation.

1. This completed form must be forwarded with the proposal to the administrator of the department to be consulted.
2. The department must respond within 10 business days of receipt of this form to insure inclusion in the final proposal. The completed original is returned to the Academic Senate Office to be inserted into the proposal and a copy is returned to the initiator.

The department must acknowledge receipt of this form and the proposal in writing to the initiator.

Failure to respond by 10 business days of receipt of this form is interpreted as support for the proposal.

3. The Proposing Department must address any concerns raised by the consulted department. This response must be in writing and will be included in the proposal following the original consultation form.

The following programs/codes (checksheets) have been identified as being affected by the changes in this proposal

(Contact FSUCurriculum@ferris.edu for this list):

Regarding the proposed check sheets – Elies advises STQM 380 is no longer taught and has been replaced by another course. The committee suggests STQM 380 be removed from the proposed check sheet.

Response/Revision

This will be replaced by directed elective

Department: **BU - MKTG- Marketing**

Administrator: Jeff Ek

Date Received: 9/6/19 Date Returned: 9/9/19

Signature: _____

Based upon department faculty review on: _____ (Date)

- We:
- Support the above proposal and authorizes updates to the checksheet(s) listed above.
 - Support the above proposal with the modifications and concerns listed below and authorizes updates to the checksheet(s) listed above.
 - Do not support the proposal for the reasons listed below and will submit a curriculum proposal to correct the checksheet(s) listed above as a result of these changes, if fully approved.

Comment Regarding the Impact this proposal has on current curriculum including prerequisites, scheduling, room assignments, and or/faculty load for your department. Use additional pages, if necessary:

CONSULTATION FORM

Form B

Form current on 12/12/18

Proposal Number: 19-059

Proposal Title: Information Security & Intelligence (ISIN) Program Revision

Proposer: Jim Furstenberg Department: **AFIS - Account, Finance, Info Systems**

Contact Person's Name: Jim Furstenberg Phone: 231-591-5335

Instructions: To be completed by each department affected by the proposed change, addition, or deletion. Potential duplication of coursework is reason for consultation.

1. This completed form must be forwarded with the proposal to the administrator of the department to be consulted.
2. The department must respond within 10 business days of receipt of this form to insure inclusion in the final proposal. The completed original is returned to the Academic Senate Office to be inserted into the proposal and a copy is returned to the initiator.

The department must acknowledge receipt of this form and the proposal in writing to the initiator.

Failure to respond by 10 business days of receipt of this form is interpreted as support for the proposal.

3. The Proposing Department must address any concerns raised by the consulted department. This response must be in writing and will be included in the proposal following the original consultation form.

The following programs/codes (checksheets) have been identified as being affected by the changes in this proposal (Contact FSUCurriculum@ferris.edu for this list):

Plans to offer courses online

Department: **Online Education**

Administrator: Amy Greene

Date Received: _____ Date Returned: _____

Signature: _____

Based upon department faculty review on: 4/11/19 (Date)

- We:
- Support the above proposal and authorizes updates to the checksheet(s) listed above.
 - Support the above proposal with the modifications and concerns listed below and authorizes updates to the checksheet(s) listed above.
 - Do not support the proposal for the reasons listed below and will submit a curriculum proposal to correct the checksheet(s) listed above as a result of these changes, if fully approved.

Comment Regarding the Impact this proposal has on current curriculum including prerequisites, scheduling, room assignments, and or/faculty load for your department. Use additional pages, if necessary:

In order for us to be able promote this as a fully online degree, a few things need to be updated in the admissions requirements. After meeting with the ISIN faculty, EIO admissions, and EIO Student Service, the following is recommended:

1. Addition of COMM 221 to the list of Communication courses required by the program (COMM 105 or 121 or 221). COMM 221 is offered online at Ferris, therefore this addition will allow a student to complete the requirement at Ferris.

2. Transfer Students:

- Admission Requirements will be a combination of Essay submission, HS or College GPA, Test Scores or MATH placement/equivalent grade.
- Essay minimum – 750 – 1000 words regarding who they are and why they desire admission to the ISI program, description of a personal quality, talent, accomplishment, contribution, or experience, and a description of someone that influenced them and why.
- HS GPA minimum – 3.0 GPA on a 4.0 scale.
- College GPA minimum – 3.0 on a 4.0 scale, combined if attended multiple institutions. GPA based on completion of 12 credit hours or more.
- Completion of the transfer equivalency for FSU's MATH 115 with a grade of "C" or higher or have either a minimum ACT Math score of 22 or minimum SAT Math score of 550.
- *Transfer equivalency for FSU ENGL 150 with a grade of "C" or higher.
- *Transfer equivalency for FSU Lab Science (4 credits) with a grade of "C" or higher.

*Please note that these courses are not offered online at FSU and must therefore be taken face-to-face at FSU or online at another institution.

CONSULTATION FORM

Form B

Form current on 12/12/18

Proposal Number: 19-059

Proposal Title: Information Security & Intelligence (ISIN) Program Revision

Proposer: Jim Furstenberg Department: **AFIS - Account, Finance, Info Systems**

Contact Person's Name: Jim Furstenberg Phone: 231-591-5335

Instructions: To be completed by each department affected by the proposed change, addition, or deletion. Potential duplication of coursework is reason for consultation.

1. This completed form must be forwarded with the proposal to the administrator of the department to be consulted.
2. The department must respond within 10 business days of receipt of this form to insure inclusion in the final proposal. The completed original is returned to the Academic Senate Office to be inserted into the proposal and a copy is returned to the initiator.

The department must acknowledge receipt of this form and the proposal in writing to the initiator.

Failure to respond by 10 business days of receipt of this form is interpreted as support for the proposal.

3. The Proposing Department must address any concerns raised by the consulted department. This response must be in writing and will be included in the proposal following the original consultation form.

The following programs/codes (checksheets) have been identified as being affected by the changes in this proposal (Contact FSUCurriculum@ferris.edu for this list):

They are removing MGMT 350 from their ISIN-BS (Information Security and Intelligence) checksheet.

No specific checksheet for the Management Department

Department: **BU - MGMT - Management**

Administrator: Gayle Lopez

Date Received: _____ Date Returned: _____

Signature: _____

Based upon department faculty review on: _____ (Date)

- We:
- Support the above proposal and authorizes updates to the checksheet(s) listed above.
 - Support the above proposal with the modifications and concerns listed below and authorizes updates to the checksheet(s) listed above.
 - Do not support the proposal for the reasons listed below and will submit a curriculum proposal to correct the checksheet(s) listed above as a result of these changes, if fully approved.

Comment Regarding the Impact this proposal has on current curriculum including prerequisites, scheduling, room assignments, and or/faculty load for your department. Use additional pages, if necessary:

****See ISIN ResolutionResponse Document in Portfolio addressing "finance" piece concern above.**

FLITE SERVICES FORM

Form C

Form current on 12/12/18

Proposal Number: 19-059

Proposal Title: Information Security & Intelligence (ISIN) Program Revision

Proposer: Jim Furstenberg

Proposer's Department: AFIS - Account, Finance, Info Systems

Contact Person's Name: Jim Furstenberg Phone: 231-591-5335

Projected number of students per year affected by proposed change: _____

Include a copy of the proposal when submitting this form to FLITE.

Sent on 02/25/19 for Consultation to the Liaison Librarian: David Scott

1. To be completed by the liaison librarian and approved by the Dean of FLITE.
2. FLITE must return the original form to the Academic Senate office to be inserted in the proposal and a copy to the initiator.
3. FLITE must respond within 10 business days of receipt of this form to insure that the form is included in the final proposal. **Failure to respond by 10 business days of receipt of this form is interpreted as support for the proposal.**

Liaison Librarian Reviewer: _____

Dean of FLITE Signature: _____

Based upon our review on 4/2/19 (Date), FLITE concludes that:

- Library resources to support the proposed curriculum change are currently available.
- Additional Library resources are needed but can be obtained from current funds.
- Support, but significant additional Library funds/resources are required in the amount of \$
- Does not support the proposal for reasons listed below.

Comment regarding the impact this proposal will have on library resources, collection development, or other FLITE programs. Use additional pages if necessary:

Course Information Form

Form EF

Form current on 12/10/18

I. ACTION:

CREATE, MODIFY, DELETE, OR Update Assessment Software

Desired Term Effective: 201908

II. COURSE IDENTIFICATION (Current): ISIN, 209 - Network Security

If deleting a course STOP HERE.

III. COURSE DATA - TO MODIFY, INDICATE THE LETTER(S) OF ALL CHANGES (A-R): _____

ONLY complete the fields that are proposing changes.

A. Course Title (30 Characters) Network Security

B. Contact Hours: Lab: ▼ Lecture: 45 Seminar: ▼

C. If not LEC/LAB/SEM, Choose from drop down [See Definitions in Appendix E]: ▼

D. College Code: BU - College of Business

E. Department Code: AFIS - Account, Finance, Info Systems

F. Credit Hours - Fixed: 3

Credit Hours – Variable (numeric range): _____

G. Hours may be repeated for additional credit: No

If yes, max times repeated _____ OR max credits awarded _____

H. Levels: Undergraduate

I. Grade Method: Standard Letter Grading

J. Does the proposed course replace an equivalent course? No

If yes, enter equivalent course: Course Prefix, Course Number – Course Title

K. Term(s) Offered: Spring

L. Max Section Enrollment: 20

M. Pre-requisite Course(s) AND minimum grade requirement in parenthesis for each course. If left blank default will be D- and if more than one course, use "AND" or "OR" to separate: ISIN 200 C- or higher

N. Other Pre-requisites or restrictions: _____

O. Co-requisite: _____

P. Course/Catalog Description (125 words)

i. Current Description: _____

ii. Proposed Description: This course introduces network management and security concepts including establishing and maintaining network standards and governance procedures. Students will gain exposure to configuring and managing network and device configurations that support organizational objectives in a secure environment. Typically offered Spring semester. (Prerequisite ISIN 200 C- or higher)

Q. Course Outcomes and Assessment Plan

i. Current Outcomes/Assessment: _____

ii. Proposed Outcomes/Assessment:

1. Develop and maintain network standards and governance procedures.

Assessment: Classroom exercises, assignments and/or assessments.

2. Identify, configure and manage network configurations and devices in a secure environment.

Assessment: Classroom exercises, assignments and/or assessments.

3. Utilize network devices and architectural configurations to establish resilient networks.

Assessment: Classroom exercises, assignments, assessments

4. Identify and understand network security monitoring process and methodology.

Assessment: Classroom exercises, assignments, assessments.

R. Course Outline including Time Allocation

i. Current Outline & Time Allocation: _____

ii. Proposed Outline & Time Allocation: •

Application of Network Security and Cybersecurity Concepts

50%

- o Understand and Apply networking, network security terminology and concepts
- o Analyze network security standards and governances
- o Analyze network security practices and common network cybersecurity attacks

•

Network Investigations and Fundamentals 30%

- o Evaluation of networking security and network investigations
- o Application of core networking principles and technologies

Identify Network Security Solutions 20%

- o Application of network security analysis tools
- o Application of network security monitoring

UCC Chair Signature & Date:

Academic Affairs Approval Signature & Date:

OFFICE OF THE REGISTRAR USE ONLY

Date Rec'd: _____ Date Completed: _____ Entered: SCACRSE, SCADETL, SCARRES, SCAPREQ

CURRICULUM PROPOSAL SUMMARY AND ROUTING FORM

Form A

Form current on 02/27/19

Proposal Number: 19-059

Proposal Title: Information Security & Intelligence (ISIN) Program Revision

Type of Curriculum Action ([Click here for Definitions](#)): Substantial Revision or Redirection of Program/Major

Proposer's College: BU - College of Business

Proposer's Department: AFIS - Accountancy, Finance, Info Systems

Proposer: Jim Furstenberg

Contact Person's Name: Jim Furstenberg Phone: 231-591-5335

Email Original Form A and completed Forms E/F & G (when applicable) to fsucurriculum@ferris.edu

	Received	Initial Review	Proposer Approved Packet	Packet Complete	"Packet Complete" - The proposal packet is done with RAM review and is sent to the college for support.
RAM Review Dates:	1/29/19	2/6/19	3/29/19	4/15/19	
	Digital Signature of Representative (Do Not Print and Sign)				ACTION - Vote Count Required
Program Faculty					5 Support 0 Support with Concerns * 0 Not Support* 0 Abstain
Department Faculty (if applicable)					22 Support 0 Support with Concerns * 0 Not Support* 0 Abstain
School Faculty (if applicable)					___ Support ___ Support with Concerns * ___ Not Support* ___ Abstain
Department/School Administrator					<input checked="" type="checkbox"/> Support <input type="checkbox"/> Support with Concerns* <input type="checkbox"/> Not Support* <input type="checkbox"/> Abstain
College Curriculum Committee					___ Support 5 Support with Concerns * ___ Not Support* ___ Abstain
Dean Dave Nicol					<input type="checkbox"/> For Information Only <input checked="" type="checkbox"/> Approve <input type="checkbox"/> Approve with Concerns <input type="checkbox"/> Not Approved
University Curriculum Committee Rusty Leonard					7 Support 0 Support with Concerns * 0 Not Support* 0 Abstain
Senate Sandra Alspach					<input type="checkbox"/> For Information Only ___ % Support ___ % Not Support* ___ % Abstain
Academic Affairs Leonard Johnson					<input type="checkbox"/> Approved <input type="checkbox"/> Not Approved <input type="checkbox"/> Hold

After Digital Signature, forward to the next reviewer - After College Support, the Dean's office email signed to proposal to fsucurriculum@ferris.edu for UCC vote.

* Support with Concerns or Not Support must include identification of specific concern with appropriate rationale

To be completed by Academic Affairs:

Board of Trustees (Date Approved)	Academic Officers of MI (Date Approved)	Date of Implementation

1. **If a PCAF is required, the President's Council must approve it *prior* to submitting this proposal to the UCC. Provide a link to the Academic Affairs website of the approved PCAF.**
Provide link here, when applicable
2. **Proposal Summary:** *Provide a detailed rationale including all curriculum action and desired date of implementation.*

The Information Security & Intelligence program completed an accreditation evaluation with ABET in the Fall of 2018. The evaluation was positive overall but some areas for improvement were identified as one might expect from evaluations. In addition, ABET review indicated that we need to increase our coverage of technical coursework as we minimally meet the 45-hour requirement. Moreover, feedback from program advisors and the National Security Agency (NSA) has influenced the proposed changes and is generally aligned with the ABET and NSA evaluations. This proposal seeks to address those identified areas as well as adjust the program to enable more courses to be articulated into the degree at the 100 and 200 level. High schools, tech centers and community colleges have provided input and support for these proposed changes as they facilitate dual enrollment and transfer possibilities. This is an important aspect in that many high schools would like to pursue dual enrollment and many community colleges have now established Cybersecurity and Information Assurance Associates degrees.

The proposal accomplishes the following:

1) Consolidates the Digital Forensics and Penetration Testing concentration into one concentration. The two concentrations currently share 2 of 4 classes in common. Most students are already completing a hybrid of the two concentrations. Combining them into one concentration eliminates student confusion, streamlines advising, and helps to eliminate errors made by students when registering for courses.

* Remove the Penetration Testing Concentration

* Rename the Digital Forensics concentration to "Digital Forensics and Penetration Testing"

* The new concentration is to include the following courses:

- DFOR 315
- ISIN 335
- ISIN 430
- DFOR 454 (new)

2) Create a second course in Network Security. The program currently has a 400-level course, ISIN 409 Network Forensics. Per feedback from ABET, NSA, and our program advisors, as well as the growing complexity of Networking and networking forensics, a lower level "Network Security" course is need as a prerequisite to the 400-level course.

3) Create a third Digital Forensics class. Digital Forensics is a strength of the ISI program as well as a profession that continues to grow and demand talent. Our program features professors that are internationally certified and known for their expertise in Digital Forensics. The third class in Digital Forensics will strengthen the Digital Forensics and Penetration Testing concentration by offering an advanced course in Digital Forensics while balancing the concentration with 2 advanced courses in each subject.

4) Add the existing ISIN 121 Digital Security Awareness course the program core, replacing a directed elective. Many of our students already take this class as a directed elective. By adding this course to the program core, the program increases opportunities for high school dual enrollment, community college articulation, and strengths the first-year course offerings in the program.

5) Remove the 5 credits of Directed Electives from the ISI program major core and MGMT350. ABET review indicated that we need to increase our coverage of technical coursework as we minimally meet the 45-hour requirement. Dropping MGMT 350 and replacing with ISIN 209 as well as dropping the 5 directed electives we sit at 118 credits. Adding in 121 brings us to 121 credits.

6) Add ISIN 209 and DFOR 454 courses to the ISI Associates Elective Options.

7) Add ISIN 209 and DFOR 454 to the ISI Minor Electives, and to the two Cybersecurity certificates.

8) Remove the Network Security concentration from the Bachelor's degree and 5 Year Masters. This concentration is rarely selected by students and only includes one introductory networking course. Many of our students enter the program having taken an equivalent course at their high school. In addition, the new NSA accreditation requirements state that each concentration must now be evaluated against NSA criteria independently.

9) Update the ISI semester by semester course plans for the ISI Bachelor and ISI 5 Year Master degrees to reflect ISIN 209 and DFOR 454.

10) Correct ISIN-409 Contact hours From --> Lab & Seminar To --> Lecture Only. Replace ISIN 409 with ISIN 209 on both Cybersecurity certificates.

* Please see ISIN ResolutionResponse Document in Portfolio regarding ECON 221 added to proposed checksheet

3. Summary of All Course Action Required - Complete a Form E/F for each course, email fsucurriculum@ferris.edu for more rows.

Prefix	Course Number	Course Title (Existing, or Newly Created Course Title)	Action	General Education Attribute*
ISIN	121	Digital Security Awareness	Add Existing Course to Program	<input type="checkbox"/>
ISIN	200	Secure Digital Technologies	Modify Existing Course	<input type="checkbox"/>
ISIN	209	Network Security	Create New Course and Add to Program	<input type="checkbox"/>
DFOR	454	Cybersec Incident Response	Create New Course and Add to Program	<input type="checkbox"/>
ISIN	409	Network Forensics & Analysis	Modify Existing Course	<input type="checkbox"/>
MGMT	350	Mgmt Metrics & Decision Making	Remove Existing Course from Program (no EF required)	<input type="checkbox"/>

*Course has a General Education attribute

4. Are there plans to offer blended or online courses? Yes
5. Will External Accreditation be sought? (For new programs or certificates only) ▼

If yes, name the organization involved with accreditation for this program.

Accrediting Organization name, when applicable

6. Email Original Form A and completed Forms E/F & G (when applicable) to FSU Curriculum (fsucurriculum@ferris.edu).

To be completed with RAM Consultation

7. **Summary of All Consultations** – RAM will provide a list of units affected and will assist in the completion of consultation form(s) required.

Form	Unit	Contact	Banner Program Title	Banner Program Code	Date Sent
Form B - UG	BU - MGMT - Management	Gayle Lopez	They are removing MGMT 350 from their ISIN-BS (Information Security and Intelligence) checksheet.	No specific checksheet for the Management Department	4/2/19
Form C - FLITE	FLITE	David Scott			4/2/19
Form B - UG	Online Education	Amy Greene	Plans to offer courses online		4/5/19

Form B- BU - MKTG - Marketing -Jeff Ek -STQM 380 being removed from checksheet 9/6/19

8. **Summary of Program/Degree Action Affecting Department Checksheets**

RAM will provide CURRENT Checksheet(s) & PROPOSED checksheet(s) for each.

Action	Degree Type	Banner Program Title	Banner Program Code
Modification	Certificate - Undergraduate	Cybersecurity	CYBR-CT-BU
Modification	Certificate - Undergraduate	Cybersecurity – Ethical Hacking	CYEH-CT-BU
Modification	AAS - Associate in Applied Science	Information Security and Intelligence	ISIN-AAS-BU
Modification	BS - Bachelor of Science	Information Security and Intelligence	ISIN-BS-BU
Modification	Minor	Information Security and Intelligence	ISIN-MNR-BU

CONSULTATION FORM

Form B

Form current on 12/12/18

Proposal Number: 19-059

Proposal Title: Information Security & Intelligence (ISIN) Program Revision

Proposer: Jim Furstenberg Department: **AFIS - Account, Finance, Info Systems**

Contact Person's Name: Jim Furstenberg Phone: 231-591-5335

Instructions: To be completed by each department affected by the proposed change, addition, or deletion. Potential duplication of coursework is reason for consultation.

1. This completed form must be forwarded with the proposal to the administrator of the department to be consulted.
2. The department must respond within 10 business days of receipt of this form to insure inclusion in the final proposal. The completed original is returned to the Academic Senate Office to be inserted into the proposal and a copy is returned to the initiator.

The department must acknowledge receipt of this form and the proposal in writing to the initiator.

Failure to respond by 10 business days of receipt of this form is interpreted as support for the proposal.

3. The Proposing Department must address any concerns raised by the consulted department. This response must be in writing and will be included in the proposal following the original consultation form.

The following programs/codes (checksheets) have been identified as being affected by the changes in this proposal (Contact FSUCurriculum@ferris.edu for this list):

They are removing MGMT 350 from their ISIN-BS (Information Security and Intelligence) checksheet.

No specific checksheet for the Management Department

Department: **BU - MGMT - Management**

Administrator: Gayle Lopez

Date Received: _____ Date Returned: _____

Signature: _____

Based upon department faculty review on: _____ (Date)

- We: Support the above proposal and authorizes updates to the checksheet(s) listed above.
- Support the above proposal with the modifications and concerns listed below and authorizes updates to the checksheet(s) listed above.
- Do not support the proposal for the reasons listed below and will submit a curriculum proposal to correct the checksheet(s) listed above as a result of these changes, if fully approved.

Comment Regarding the Impact this proposal has on current curriculum including prerequisites, scheduling, room assignments, and or/faculty load for your department. Use additional pages, if necessary:

CONSULTATION FORM

Form B

Form current on 12/12/18

Proposal Number: 19-059

Proposal Title: Information Security & Intelligence (ISIN) Program Revision

Proposer: Jim Furstenberg Department: **AFIS - Account, Finance, Info Systems**

Contact Person's Name: Jim Furstenberg Phone: 231-591-5335

Instructions: To be completed by each department affected by the proposed change, addition, or deletion. Potential duplication of coursework is reason for consultation.

1. This completed form must be forwarded with the proposal to the administrator of the department to be consulted.
2. The department must respond within 10 business days of receipt of this form to insure inclusion in the final proposal. The completed original is returned to the Academic Senate Office to be inserted into the proposal and a copy is returned to the initiator.

The department must acknowledge receipt of this form and the proposal in writing to the initiator.

Failure to respond by 10 business days of receipt of this form is interpreted as support for the proposal.

3. The Proposing Department must address any concerns raised by the consulted department. This response must be in writing and will be included in the proposal following the original consultation form.

The following programs/codes (checksheets) have been identified as being affected by the changes in this proposal (Contact FSUCurriculum@ferris.edu for this list):

Plans to offer courses online

Department: **Online Education**

Administrator: Amy Greene

Date Received: _____ Date Returned: _____

Signature: _____

Based upon department faculty review on: _____ (Date)

- We: Support the above proposal and authorizes updates to the checksheet(s) listed above.
- Support the above proposal with the modifications and concerns listed below and authorizes updates to the checksheet(s) listed above.
- Do not support the proposal for the reasons listed below and will submit a curriculum proposal to correct the checksheet(s) listed above as a result of these changes, if fully approved.

Comment Regarding the Impact this proposal has on current curriculum including prerequisites, scheduling, room assignments, and or/faculty load for your department. Use additional pages, if necessary:

FLITE SERVICES FORM

Form C

Form current on 12/12/18

Proposal Number: 19-059

Proposal Title: Information Security & Intelligence (ISIN) Program Revision

Proposer: Jim Furstenberg

Proposer's Department: AFIS - Account, Finance, Info Systems

Contact Person's Name: Jim Furstenberg Phone: 231-591-5335

Projected number of students per year affected by proposed change: _____

Include a copy of the proposal when submitting this form to FLITE.

Sent on 02/25/19 for Consultation to the Liaison Librarian: David Scott

1. To be completed by the liaison librarian and approved by the Dean of FLITE.
2. FLITE must return the original form to the Academic Senate office to be inserted in the proposal and a copy to the initiator.
3. FLITE must respond within 10 business days of receipt of this form to insure that the form is included in the final proposal. **Failure to respond by 10 business days of receipt of this form is interpreted as support for the proposal.**

Liaison Librarian Reviewer: _____

Dean of FLITE Signature: _____

Based upon our review on _____ (Date), FLITE concludes that:

- Library resources to support the proposed curriculum change are currently available.
- Additional Library resources are needed but can be obtained from current funds.
- Support, but significant additional Library funds/resources are required in the amount of \$
- Does not support the proposal for reasons listed below.

Comment regarding the impact this proposal will have on library resources, collection development, or other FLITE programs. Use additional pages if necessary:

Student Name: _____

Student ID: _____

Prerequisites shown in parenthesis

REQUIRED COURSES – 12 Credits Required			Crs.	Gr.
ISIN	200	Secure Digital Technologies (None)	3	
ISIN	308	Principles of Information Security (ISIN 200 or Instructor Permission)	3	
DFOR	310	Digital Forensics and Analysis (ISIN 121 or ISIN 308 w/C or higher)	3	
ISIN	409	Network Forensics and Analysis (ISIN 200 and ISIN 308 w/C- or higher)	3	

CERTIFICATE OUTCOMES

1. Theory and Practice – Work as a member of an information security and/or intelligence team and effectively integrate theories and practice in an ISI environment.
2. Security Domain – Demonstrate knowledge of concepts and methodologies of the principles of information security objectives and the information security lifecycle.
3. Networks and Devices – Set up computer networks and peripheral devices, install and maintain software; demonstrate how to handle, transport, utilize and safeguard digital devices and information.
4. Digital Devices – Theorize ways digital devices could be used for security and criminal activity and collect and process digital information in support of an investigation or hypothesis.
5. Digital Forensics – Demonstrate knowledge of concepts and methodologies of incidence response, cyber forensics (acquisition, preservation, analysis, and presentation of evidence) and the information security lifecycle including cyber laws, cybercrimes, incidence response, pre-incident preparation, detection, notification, initial response, strategic decisions, response, recovery, and reporting.

DECLARATION OF CERTIFICATE

Any person admitted to Ferris State University may enroll in courses for undergraduate COB certificates and must declare the certificate with the **AFIS Department (231) 591-2434, BUS 212.**

STUDENT Signature

Date

CERTIFICATE ADVISOR Signature

Date

DEPARTMENT HEAD/CHAIR Signature

Date

ADMISSION REQUIREMENTS

- Applicant should show proof of high school graduation with a 3.00 GPA. If it is determined by the COB Dean's Office/SAA that regular program admission criteria should be met in order to complete the certificate successfully and be a contributing member of the course, all college transcripts should be submitted to the Admissions Office. Once admitted, an advisor will be assigned by the College of Business in the certificate program.
- Dual enrolled/concurrent students must complete their high school degree (provide transcript) before the certificate will be granted from FSU.
- Students wishing to pursue a bachelor or associate degree must meet the admission criteria for the program. This criteria review is initiated when the "Program Change Form" request is processed through the COB Dean's Office/SAA.
- Admission requirements for the certificate are identical to the admission requirements for the Information Security and Intelligence program at Ferris State University.

ADDITIONAL GRADUATION REQUIREMENTS

1. No more than 50% of the credits in a certificate may be transferred from another institution.
2. If a student is in a FSU degree-seeking program, the certificate will not be granted if more than 50% of the certificate credits are required in the program/major.
3. A 2.0 cumulative GPA is required for completion of the certificate with no individual course grade lower than 2.0.
4. A term prior to completion of the Certificate, the student will log into MyFSU, and complete the "Apply for Graduation". You will receive an email back with the next steps to take. Once this is done, the Graduation Secretary will notify the Registrar who will note the completion of the Certificate.

NOTICE: Students who return to the university after an interrupted enrollment (not including summer semester) must normally meet the requirements of the curriculum, which are in effect at the time of their return, not the requirements which were in effect when they were originally admitted.

CYBERSECURITY (CYBR) – 12 CREDITS
2019-2020

Certificate

PROPOSED CHECKSHEET

College of Business

Student Name	Student ID

ALL CERTIFICATE REQUIREMENTS 12 CREDITS REQUIRED

(Prerequisites are shown in parentheses)

CERTIFICATE COURSES – 12 CREDITS REQUIRED

Prefix	Code	Course Title	Credits	Grade
ISIN	200	Secure Digital Technologies (ISIN 121 with C- or higher)	3	
ISIN	209	Network Security (ISIN 200 with C- or higher)	3	
ISIN	308	Principles of Information Security (ISIN 200 or Instructor Permission)	3	
DFOR	310	Digital Forensics and Analysis (ISIN 121 or 308 with C or higher)	3	
ISIN	409	Network Forensics and Analysis (ISIN 200 and 308 with C- or higher)	3	

NOTES

- Students who return to the university after an interrupted enrollment (not including summer semester) must normally meet the requirements of the curriculum which are in effect at the time of their return, not the requirements which were in effect when they were originally admitted.

ADMISSION REQUIREMENTS

- Applicant should show proof of high school graduation with a 3.0 GPA (on a 4.0 scale). If it is determined by the College of Business Dean's Office/SAA that regular program admission criteria should be met in order to complete the certificate successfully and be a contributing member of the course, all college transcripts should be submitted to the Admissions Office. Once admitted, an advisor will be assigned by the College of Business in the certificate program.
- Dual enrolled/concurrent students must complete their high school degree (provide transcript) before the certificate will be granted from FSU.
- Students wishing to pursue a bachelor or associate degree must meet the admission criteria for the program. This criteria review is initiated when the "Program Change Form" request is processed through the College of Business Dean's Office/SAA.
- Admission requirements for the certificate are identical to the admission requirements for the Information Security and Intelligence program at Ferris State University.

DEGREE OUTCOMES

- Theory and Practice - Work as a member of an information security and/or intelligence team and effectively integrate theories and practice in an ISI environment.
- Security Domain - Demonstrate knowledge of concepts and methodologies of the principles of information security objectives and the information security lifecycle.
- Networks and Devices - Set up computer networks and peripheral devices, install and maintain software; demonstrate how to handle, transport, utilize and safeguard digital devices and information.
- Digital Devices - Theorize ways digital devices could be used for security and criminal activity and collect and process digital information in support of an investigation or hypothesis.
- Digital Forensics - Demonstrate knowledge of concepts and methodologies of incidence response, cyber forensics (acquisition, preservation, analysis, and presentation of evidence) and the information security lifecycle including cyber laws, cybercrimes, incidence response, pre-incident preparation, detection, notification, initial response, strategic decisions, response, recovery, and reporting.

GRADUATION REQUIREMENTS**In addition to meeting all the programmatic requirements, students must:**

1. Maintain a 2.00 or higher cumulative GPA with no individual course grade lower than 2.0.
2. Earn 50% of the certificate credits from FSU (Residency).
3. Earn no more than 50% of the certificate credits from courses that are required in their program/major; if they are in an FSU degree-seeking program.
4. A term prior to completion of the certificate, log into MyFSU and complete the "Apply for Graduation". You will receive an email back with the next steps to take. Once this is done, the Graduation Secretary will notify the Registrar who will note the completion of the certificate.

CONTACT INFORMATION

COLLEGE: College of Business

PHONE: 231-591-2434

DEPARTMENT/SCHOOL: AFIS/College of Business

EMAIL: afis@ferris.edu

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DECLARATION OF CERTIFICATE

Role	Signature	Date
Student		
Certificate Advisor		
Department Head/Chair		

Student Name: _____

Student ID: _____

Prerequisites shown in parenthesis

REQUIRED COURSES – 12 Credits Required			Crs.	Gr.
ISIN	306	Security Informatics (Sophomore Status or Instructor Permission)	3	
ISIN	308	Principles of Information Security (ISIN 200 or Instructor Permission)	3	
ISIN	312	Applications of Information Security ((ISIN 305 or ISIN 306) and ISIN 308)	3	
CHOOSE ONE	ISIN 200	Secure Digital Technologies (None)	3	
	DFOR 310	Digital Forensics and Analysis (ISIN 121 or ISIN 308 w/C or higher)		
	ISIN 335	Pen Testing and Cloud Security (ISIN 312)		
	ISIN 409	Network Forensics and Analysis (ISIN 200 and ISIN 308 w/C- or higher)		
	ISIN 430	Pen Testing and Mobile Security (ISIN 312 and ISIN 325)		

CERTIFICATE OUTCOMES

1. Theory and Practice – Work as a member of an information security and/or intelligence team and effectively integrate theories and practice in an ISI environment.
2. Security Domain – Demonstrate knowledge of concepts and methodologies of the principles of information security objectives and the information security lifecycle.
3. Security Assessment – Assess the security posture of computer networks and computer software; demonstrate how to identify security vulnerabilities, remediate vulnerabilities, and document the vulnerabilities.
4. Digital Devices – Theorize ways digital devices could be used for security and criminal activity and collect and process digital information in support of an investigation or hypothesis.
5. Event Analysis Recognize the potential for multiple explanations for events and information and be able to analyze and describe the accuracy of the information.

DECLARATION OF CERTIFICATE

Any person admitted to Ferris State University may enroll in courses for undergraduate COB certificates and must declare the certificate with the AFIS Department (231) 591-2434, BUS 212.

STUDENT Signature

Date

CERTIFICATE ADVISOR Signature

Date

DEPARTMENT HEAD/CHAIR Signature

Date

ADMISSION REQUIREMENTS

- Applicant should show proof of high school graduation with a 3.0 GPA. If it is determined by the COB Dean's Office/SAA that regular program admission criteria should be met in order to complete the certificate successfully and be a contributing member of the course, all college transcripts should be submitted to the Admissions Office. Once admitted, an advisor will be assigned by the College of Business in the certificate program.
- Dual enrolled/concurrent students must complete their high school degree (provide transcript) before the certificate will be granted from FSU.
- Students wishing to pursue a bachelor or associate degree must meet the admission criteria for the program. This criteria review is initiated when the "Program Change Form" request is processed through the COB Dean's Office/SAA.
- Admission requirements for the certificate are identical to the admission requirements for the Information Security and Intelligence program at Ferris State University.

ADDITIONAL GRADUATION REQUIREMENTS

1. No more than 50% of the credits in a certificate may be transferred from another institution.
2. If a student is in a FSU degree-seeking program, the certificate will not be granted if more than 50% of the certificate credits are required in the program/major.
3. A 2.0 cumulative GPA is required for completion of the certificate with no individual course grade lower than 2.0.
4. A term prior to completion of the Certificate, the student will log into MyFSU, and complete the "Apply for Graduation". You will receive an email back with the next steps to take. Once this is done, the Graduation Secretary will notify the Registrar who will note the completion of the Certificate.

NOTICE: Students who return to the university after an interrupted enrollment (not including summer semester) must normally meet the requirements of the curriculum, which are in effect at the time of their return, not the requirements which were in effect when they were originally admitted.

CYBERSECURITY - ETHICAL HACKING (CYEH) – 12 CREDITS

2019-2020

Certificate

PROPOSED CHECKSHEET

College of Business

Student Name	Student ID

ALL CERTIFICATE REQUIREMENTS 12 CREDITS REQUIRED (Prerequisites are shown in parentheses)

CERTIFICATE COURSES – 12 CREDITS REQUIRED

Prefix	Code	Course Title	Credits	Grade
ISIN	306	Security Informatics (Sophomore Status or Instructor Permission)	3	
ISIN	308	Principles of Information Security (ISIN 200 or Instructor Permission)	3	
ISIN	312	Applications of Information Security ((ISIN 305 or 306) and ISIN 308)	3	
CHOOSE 1 OF 5	ISIN 200	Secure Digital Technologies (ISIN 121 with C- or higher)	3	
	ISIN 209	Network Security (ISIN 200 with C- or higher)	3	
	DFOR 310	Digital Forensics and Analysis (ISIN 121 or 308 with C or higher)	3	
	ISIN 335	Pen Testing and Cloud Security (ISIN 312)	3	
	ISIN 409	Network Forensics and Analysis (ISIN 200 and 308 with C- or higher)	3	
	ISIN 430	Pen Testing and Mobile Security (ISIN 312 and 325)	3	

NOTES

- Students who return to the university after an interrupted enrollment (not including summer semester) must normally meet the requirements of the curriculum which are in effect at the time of their return, not the requirements which were in effect when they were originally admitted.

ADMISSION REQUIREMENTS

- Applicant should show proof of high school graduation with a 3.0 GPA (on a 4.0 scale). If it is determined by the College of Business Dean's Office/SAA that regular program admission criteria should be met in order to complete the certificate successfully and be a contributing member of the course, all college transcripts should be submitted to the Admissions Office. Once admitted, an advisor will be assigned by the College of Business in the certificate program.
- Dual enrolled/concurrent students must complete their high school degree (provide transcript) before the certificate will be granted from FSU.
- Students wishing to pursue a bachelor or associate degree must meet the admission criteria for the program. This criteria review is initiated when the "Program Change Form" request is processed through the College of Business Dean's Office/SAA.
- Admission requirements for the certificate are identical to the admission requirements for the Information Security and Intelligence program at Ferris State University.

1. Theory and Practice - Work as a member of an information security and/or intelligence team and effectively integrate theories and practice in an ISI environment.
2. Security Domain - Demonstrate knowledge of concepts and methodologies of the principles of information security objectives and the information security lifecycle.
3. Security Assessment - Assess the security posture of computer networks and computer software; demonstrate how to identify security vulnerabilities, remediate vulnerabilities, and document the vulnerabilities.
4. Digital Devices - Theorize ways digital devices could be used for security and criminal activity and collect and process digital information in support of an investigation or hypothesis.
5. Event Analysis - Recognize the potential for multiple explanations for events and information and be able to analyze and describe the accuracy of the information.

GRADUATION REQUIREMENTS

In addition to meeting all the programmatic requirements, students must:

1. Maintain a 2.00 or higher cumulative GPA with no individual grade lower than a 2.0.
2. Earn 50% of the certificate credits from FSU (Residency).
3. Earn no more than 50% of the certificate credits from courses that are required in their program/major; if they are in an FSU degree-seeking program.
4. A term prior to completion of the certificate, log into MyFSU and complete the "Apply for Graduation". You will receive an email back with the next steps to take. Once this is done, the Graduation Secretary will notify the Registrar who will note the completion of the certificate.

CONTACT INFORMATION

COLLEGE: College of Business

PHONE: 231-591-2434

DEPARTMENT/SCHOOL: AFIS/College of Business

EMAIL: afis@ferris.edu

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DECLARATION OF CERTIFICATE

Role	Signature	Date
Student		
Certificate Advisor		
Department Head/Chair		

Student Name: _____

Student ID: _____

University General Education Requirements	Crs.	Gr.
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Tier 1 Foundation Competencies		<i>Prerequisites shown in parenthesis</i>
COMMUNICATION COMPETENCY – Minimum 6 Credits Required		
ENGL	150	English 1 (ENGL 074 or ACT English 14 or SAT ERW 450 or pre2016 SAT Writing 370 or TOEFL Internet Total Score 61 or MSUFLT Composite 73 or IELTS Overall 5.5)
ENGL	250	English 2 (ENGL 150 w/C- or higher)
QUANTITATIVE LITERACY COMPETENCY – Minimum 3 Credits		
CHOOSE ONE	MATH 114	Quantitative Reasoning for Professionals 2 (((MATH 109 or 110) w/C- or higher or Math ACT 19 or SAT (post-2016) 500 or SAT (pre-2016) 460) and (ENGL 074 or English ACT 14 or SAT (post-2016) 370 or SAT (pre 2-16) 450)); if Math ACT 24 or SAT 580 or higher, student must substitute General Education Elective credits.
	MATH 115	Intermediate Algebra ((MATH 109 or 110) w/C- or higher or Math ACT 19 or SAT (post-2016) 500 or SAT (pre-2016) 460); if Math ACT 24 or SAT 580 or higher, student must substitute General Education Elective credits.

Tier 2 Distribution Competencies	
NATURAL SCIENCES COMPETENCY – Minimum 3 Credits	
	3-4
CULTURE COMPETENCY – Minimum 6 Credits	
	(Foreign Language recommended)
	3
	3
SELF AND SOCIETY COMPETENCY – Minimum 3 Credits	
	3

ADDITIONAL GENERAL EDUCATION REQUIREMENT		
CHOOSE ONE	COMM 105	Interpersonal Communication (None)
	COMM 121	Fundamentals of Public Speaking (None)
		3

Total Credits: 60-62: General Education Credits 24 to 26, ISI Major Credits 27, ISI Option Credits 9, Total Credits 60-62

Major Requirements– Minimum 36 Credits	Crs.	Gr.
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MAJOR COURSES – Minimum 27 Credits		
ISIN	200	Secure Digital Technologies (None)
STQM	260	Introduction to Statistics (MATH 114, 115, 116, 120, 126, 130, 132, or 135, w/C- or higher or Math ACT 24 or SAT (post-2016) 580 or SAT (pre-2016) 560).
STQM	270	Introduction to Data Mining (STQM 260 or COHP 350 or MATH 251 or MFGE 341 or PSYC 210 or SOCY 371 w/ C- or higher)
ISIN	300	Link and Visual Analysis (None)
ISIN	306	Security Informatics (Sophomore Status or Instructor Permission)
ISIN	308	Principles of Information Security (ISIN 200 or Instructor Permission)
DFOR	310	Digital Forensics and Analysis (ISIN 121 or ISIN 308 w/C or higher)
ISIN	312	Applications of Information Security ((ISIN 305 or ISIN 306) and ISIN 30)
ISIN	325	Database Security (Sophomore Status)

INFORMATION SECURITY AND INTELLIGENCE - 60 Credits

Associates (AAS)

CURRENT CHECKSHEET

College of Business

Elective Options – Minimum 9 Credits – Advisor Approval required				
CHOOSE THREE	ISIN 301	Data Intelligence Competitive Theory (ISIN 300)	3	
	DFOR 315	Advanced Digital Forensics (DFOR 310 w/C or higher)	3	
	ISIN 317	Fraud Examination (None)	3	
	PROJ 320	Project Management Fundamentals (Sophomore Status)	3	
	STQM 322	Inferential Statistics (STQM 260 w/C- or higher)	3	
	ISIN 335	Pen Testing and Cloud Security (ISIN 312)	3	
	STQM 342	Data Mining Tools (STQM 270 w/C- or higher)	3	
	STQM 360	Risk Analysis and Strategy (STQM 260 w/C- or higher)	3	
	ISIN 380	Current Issues in Information Security and Intelligence (ISIN 308)	3	
	STQM 380	Data Mining Processes (STQM 342 w/C- or higher)	3	
	ISIN 429	Legal and Ethical Issues in Information Security (Sophomore Status)	3	
	ISIN 430	Pen Testing and Mobile Security (ISIN 312 and ISIN 325)	3	
		Directed Elective	3	

Semester-By-Semester Layout of Classes

FIRST YEAR

Fall Semester

Class	Credits
COMM 105 or COMM 121	3
MATH 114 or MATH 115	3-4
Natural Sciences Competency	3-4
ENGL 150	3
Culture Competency – Foreign Language recommended	3
Total Credits	15-17

Spring Semester

Class	Credits
ENGL 250	3
ISIN 200	3
Self and Society Competency	3
STQM 260	3
ISIN 300	3
Total Credits	15

Summer Semester

Class	Credits
Culture Competency	
Total Credits	

SECOND YEAR

Fall Semester

Class	Credits
ISIN 306	3
ISIN 308	3
ISIN 325	3
STQM 270	3
ISI Major Option Class	3
Total Credits	15

Spring Semester

Class	Credits
ISIN 312	3
DFOR 310	3
ISI Major Option Class	3
ISI Major Option Class	3
ISI Major Option Class	3
Total Credits	15

Summer Semester

Class	Credits
Total Credits	

NOTE: Although taking classes during summer semester in the program is optional, doing so may expedite the completion of your degree.

DEGREE OUTCOMES

1. Theory and Practice – Work as a member of an information security and/or intelligence team and effectively integrate theories and practice in an ISI environment.
2. Digital Devices – Theorize ways digital devices could be used for security and criminal activity and collect and process digital information in support of an investigation or hypothesis.
3. Security Risk Analysis – Develop skills for evaluating organizational structure, environment, and planning strategies for security risk and analyze the effectiveness of a security plan against the methods used by organized crime, gangs and terrorist organizations.
4. Data Bases – Design, construct and maintain databases in a format consistent with data mining. Analyze these structures in a temporal manner and present findings using a variety of methods including visual analysis tools and techniques.
5. Event Analysis – Recognize the potential for multiples explanations for events and information an be able to analyze and describe the accuracy of the information.
6. Forensic Tools Utilize digital forensic tools and encryption technology to reconstruct information and recover lost or deleted files in a variety of digital platforms and settings using appropriate methodologies
7. Networks and devices – Set up computer networks and peripheral devices, install and maintain software; demonstrate how to handle, transport, utilize and safeguard digital devices and information.
8. ISI Lifecycle – Demonstrate knowledge of concepts and methodologies in information security and the Information Security Lifecycle (Protection) including information security administration, Security+ and CISSP.
9. Digital Forensics – Demonstrate knowledge of concepts and methodologies of incidence response, cyber forensics (acquisition, preservation, analysis, and presentation of evidence) and the information security lifecycle including cyber laws, cybercrimes, incidence response, pre-incident preparation, detection, notification, initial response, strategic decisions, response, recovery, and reporting.
10. Data Mining – Demonstrate knowledge of business intelligence and the evaluation of analytical data used in tragic decision making including knowledge discovery, tracking, managing and understanding organized data.

ADMISSION REQUIREMENTS

New Students

- Minimum 3.0 High School GPA
- Minimum ACT composite score of 22 and ACT MATH score of 22 or SAT minimum math score of 550.

Transfer Students

- Combined college or university GPA of 3.0 (on a 4.0 scale) from all institutions attended. GPA based on completion of 24 credit hours or more.
- Students must have completed the transfer equivalency of FSU's MATH 115 with a grade of C or higher or have either a minimum ACT MATH score of 22 or minimum SAT MATH score of 550.
- Additional requirements: All students applying for admission to the ISI program will have to submit a 750 to 1,000 word essay that addresses the following: who they are and why they desire admission to the ISI program, description of a personal quality, talent, accomplishment, contribution or experience, and a description of someone that influenced them and why.

GRADUATION REQUIREMENTS

1. Maintain a 2.00 cumulative GPA in all FSU courses
2. Have 15 credits FSU Residency/15 credit hours must be Ferris classes.
3. Have a minimum 60 total credits to earn an associate degree

NOTICE: Students who return to the university after an interrupted enrollment (not including summer semester) must normally meet the requirements of the curriculum, which are in effect at the time of their return, not the requirements which were in effect when they were originally admitted.

INFORMATION SECURITY AND INTELLIGENCE (ISIN) – 60 CREDITS
2019-2020

Associate of Applied Science (AAS)

PROPOSED CHECKSHEET

College of Business

Student Name	Student ID

UNIVERSITY REQUIREMENTS
FIRST YEAR SEMINAR REQUIREMENT (FSUS 100 OR EQUIVALENT)

All First-Time-In-Any-College Freshman (FTIAC's) must complete a one-credit FSUS 100 course, or its equivalent. Additional information and the definition of FTIAC for FSUS purposes can be found in the: [Ferris State University Academic Affairs FSUS Policy](#)

Prefix	Code	Course Title	Credits	Grade

UNIVERSITY GENERAL EDUCATION REQUIREMENTS

(Prerequisites are shown in parentheses)

Courses in this section are required to satisfy the University General Education Requirements for an associate's degree. The University General Education requirements can be found on the: [Ferris State University General Education Requirements Webpage](#)

COMMUNICATION COMPETENCY – 6 CREDITS REQUIRED (OR THEIR EQUIVALENT)

Prefix	Code	Course Title	Credits	Grade
ENGL	150	English 1 (ENGL 074 or English ACT 14 or (Pre-2016) Reading SAT 370 or (Post-2016) ERW SAT 450 or TOEFL Internet Total Score 61 or MSU-ELT Composite 73 or IELTS Overall 5.5)	3	
ENGL	250	English 2 (ENGL 150 with C- or higher)	3	

QUANTITATIVE LITERACY COMPETENCY – 3 CREDITS REQUIRED (OR THEIR EQUIVALENT)

Prefix	Code	Course Title	Credits	Grade
CHOOSE 1 OF 2	MATH 114	Quantitative Reasoning for Professionals 2 ((MATH 109 or 110 with C- or higher or Math ACT 19 or (Pre-2016) Math SAT 460 or (Post-2016) Math SAT 500) and (ENGL 074 or English ACT 14 or (Pre-2016) Reading SAT 370 or (Post-2016) ERW SAT 450); if Math ACT 24 or SAT 580 or higher, student must substitute General Education Elective credits)	4	
	MATH 115	Intermediate Algebra (MATH 109 or 110 with C- or higher or Math ACT 19 or (Pre-2016) Math SAT 460 or (Post-2016) Math SAT 500; if Math ACT 24 or SAT 580 or higher, student must substitute General Education Elective credits)	3	

NATURAL SCIENCES COMPETENCY – 3 CREDITS REQUIRED

One course is required with a minimum of 3 credits: must be a lab course.

Prefix	Code	Course Title	Credits	Grade

CULTURE COMPETENCY – 6 CREDITS REQUIRED

A foreign language course is recommended.

Prefix	Code	Course Title	Credits	Grade

SELF AND SOCIETY COMPETENCY – 3 CREDITS REQUIRED

Prefix	Code	Course Title	Credits	Grade

INFORMATION SECURITY AND INTELLIGENCE (ISIN) – 60 CREDITS

Associate of Applied Science (AAS)

PROPOSED CHECKSHEET

2019-2020

College of Business

ADDITIONAL GENERAL EDUCATION REQUIREMENTS – 3 CREDITS REQUIRED

These courses are additional General Education courses to meet the requirements for this specific program.

CHOOSE 1 OF 2	COMM 105	Interpersonal Communication (None)	3	
	COMM 121	Fundamentals of Public Speaking (None)	3	

ISIN	121	Digital Security Awareness (None)	3	
ISIN	200	Secure Digital Technologies (ISIN 121 with C- or higher)	3	
STQM	260	Introduction to Statistics (MATH 114, 115, 116, 120, 126, 130, 132, or 135 with a C- or higher or Math ACT 24 or (Pre-2016) Math SAT 560 or (Post-2016) Math SAT 580)	3	
STQM	270	Introduction to Data Mining (COHP 350, MATH 251, MFGE 341, PSYC 210, SOCY 371, or STQM 260 with C- or higher)	3	
ISIN	300	Link and Visual Analysis (None)	3	
ISIN	306	Security Informatics (Sophomore Status or Instructor Permission)	3	
ISIN	308	Principles of Information Security (ISIN 200 or Instructor Permission)	3	
DFOR	310	Digital Forensics and Analysis (ISIN 121 or 308 with C or higher)	3	
ISIN	312	Applications of Information Security ((ISIN 305 or 306) and 308)	3	
ISIN	325	Database Security (Sophomore Status)	3	

CHOOSE 3 OF 16	ISIN 209	Network Security (ISIN 200 with C- or higher)	3	
	STQM 270	Introduction to Data Mining (COHP 350, MATH 251, MFGE 341, PSYC 210, SOCY 371, or STQM 260 with C- or higher)	3	
	ISIN 301	Data Intelligence Competitive Theory (ISIN 300)	3	
	DFOR 315	Advanced Digital Forensics (DFOR 310 with C or higher)	3	
	ISIN 317	Fraud Examination (None)	3	
	PROJ 320	Project Management Fundamentals (Sophomore Status)	3	
	STQM 322	Inferential Statistics (STQM 260 with C- or higher)	3	
	ISIN 335	Pen Testing and Cloud Security (ISIN 312)	3	
	STQM 342	Data Mining Tools (STQM 270 with C or higher)	3	
	STQM 360	Risk Analysis and Strategy (STQM 260 with C- or higher)	3	
	ISIN 380	Current Issues in Information Security and Intelligence (ISIN 308)	3	
	STQM 380	Data Mining Processes (STQM 342 with C- or higher)	3	
	ISIN 429	Legal and Ethical Issues in Information Security (Sophomore Status)	3	
	ISIN 430	Pen Testing and Mobile Security (ISIN 312 and 325)	3	
	DFOR 454	CyberSec Incident Response (DFOR 315)	3	
		Directed Elective	3	

NOTES

- Students who return to the university after an interrupted enrollment (not including summer semester) must normally meet the requirements of the curriculum which are in effect at the time of their return, not the requirements which were in effect when they were originally admitted.

**ADMISSION REQUIREMENTS****New Students**

- Minimum 3.0 High School GPA (on a 4.0 scale)
- Minimum ACT Composite score of 22 and ACT Math score of 22 or SAT minimum Math score of 550.

Transfer Students

- Combined college of university GPA of 3.0 (on a 4.0 scale) from all institutions attended. GPA based on completion of 24 credit hours or more.
- Students must have completed the transfer equivalency of FSU's MATH 115 with a grade of C or higher or have either a minimum ACT Math score of 22 or minimum SAT Math score of 550.
- Additional requirements: All students applying for admission to the ISI program will have to submit a 750 to 1,000 word essay that addresses the following: who they are and why they desire admission to the ISI program, description of a personal quality, talent, accomplishment, contribution or experience, and a description of someone that influenced them and why.

DEGREE OUTCOMES

1. Theory and Practice - Work as a member of an information security and/or intelligence team and effectively integrate theories and practice in an ISI environment.
2. Digital Devices - Theorize ways digital devices could be used for security and criminal activity and collect and process digital information in support of an investigation or hypothesis.
3. Security Risk Analysis - Develop skills for evaluating organizational structure, environment, and planning strategies for security risk and analyze the effectiveness of a security plan against the methods used by organized crime, gangs and terrorist organizations.
4. Databases - Design, construct and maintain databases in a format consistent with data mining. Analyze these structures in a temporal manner and present findings using a variety of methods including visual analysis tools and techniques.
5. Event Analysis - Recognize the potential for multiples explanations for events and information and be able to analyze and describe the accuracy of the information.
6. Forensic Tools - Utilize digital forensic tools and encryption technology to reconstruct information and recover lost or deleted files in a variety of digital platforms and settings using appropriate methodologies
7. Networks and Devices - Set up computer networks and peripheral devices, install and maintain software; demonstrate how to handle, transport, utilize and safeguard digital devices and information.
8. ISI Lifecycle - Demonstrate knowledge of concepts and methodologies in information security and the Information Security Lifecycle (Protection) including information security administration, Security+ and CISSP.
9. Digital Forensics - Demonstrate knowledge of concepts and methodologies of incidence response, cyber forensics (acquisition, preservation, analysis, and presentation of evidence) and the information security lifecycle including cyber laws, cybercrimes, incidence response, pre-incident preparation, detection, notification, initial response, strategic decisions, response, recovery, and reporting.
10. Data Mining - Demonstrate knowledge of business intelligence and the evaluation of analytical data used in tragic decision making including knowledge discovery, tracking, managing and understanding organized data.

GRADUATION REQUIREMENTS

In addition to meeting all the programmatic requirements, students must:

1. Meet University General Education requirements.
2. Earn 15 credits from FSU (Residency).
3. Maintain a 2.00 or higher cumulative FSU GPA.
4. Earn a minimum of 60 credits.

CONTACT INFORMATION

COLLEGE: College of Business
DEPARTMENT/SCHOOL: AFIS/College of Business

PHONE: 231-591-2434
EMAIL: afis@ferris.edu

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SEMESTER LAYOUT OF COURSES

FIRST YEAR

Fall Courses		Credits	Spring Courses		Credits	Summer Courses		Credits
COMM 105 or 121		3	ENGL 250		3	Culture Competency		3
MATH 114 or 115		3-4	ISIN 200		3			
Natural Sciences Competency		3-4	Self and Society Competency		3			
ENGL 150		3	STQM 260		3			
ISIN 121		3	ISIN 300		3			
Total Credits		15-17	Total Credits		15	Total Credits		3

SECOND YEAR

Fall Courses		Credits	Spring Courses		Credits	Summer Courses		Credits
ISIN 306		3	ISIN 312		3			
ISIN 308		3	DFOR 310		3			
ISIN 325		3	Elective Course (Advisor Approval)		3			
STQM 270 Culture Competency		3	Elective Course (Advisor Approval)		3			
Elective Course (Advisor Approval)		3						
Total Credits		15	Total Credits		12	Total Credits		



Student Name: _____

Student ID: _____

University General Education Requirements Crs Gr

Tier 1 Foundation Competencies *Prerequisites shown in parenthesis*

COMMUNICATION COMPETENCY – Minimum 12 Credits

CHOOSE ONE	COMM 105	Interpersonal Communication	3	
	COMM 121	Fundamentals of Public Speaking		
ENGL	150	English 1 (ENGL 074 or ACT English 14 or SAT ERW 450 or pre2016 SAT Writing 370 or TOEFL Internet Total Score 61 or MSUFLT Composite 73 or IELTS Overall 5.5)	3	
ENGL	250	English 2 (ENGL 150 w/C- or higher)	3	
CHOOSE ONE	ENGL 311	Advanced Technical Writing (ENGL 250 or ENGL 211 w/ C or higher)	3	
	ENGL 321	Advanced Composition (ENGL 250 or ENGL 211 w/C or higher)		
	ENGL 325	Advanced Business Writing (ENGL 250 or ENGL 211 w/C or higher)		

QUANTITATIVE LITERACY COMPETENCY – Minimum 3 Credits

CHOOSE ONE	MATH 114	Quantitative Reasoning for Professionals 2 (((MATH 109 or 110) w/C- or higher or Math ACT 19 or SAT (after 2016) 500 or SAT (pre 2016) 460) and (ENGL 074 or English ACT 14 or SAT (post 2016 370) or SAT (pre 2-16) 450)); if MATH ACT 24 or SAT 580 or higher, student must substitute General Education Elective credits.	4	
	MATH 115	Intermediate Algebra ((MATH 109 or 110) w/C- or higher or Math ACT 19 or SAT post-2016) 500 or SAT (pre-2016) 460); if MATH ACT 24 or SAT 580 or higher, student must substitute General Education Elective credits.	3	

Tier 2 Distribution Competencies

NATURAL SCIENCES COMPETENCY – Minimum 6 Credits with one lab course

			4	
			3	

**CULTURE COMPETENCY – Minimum 9 Credits from two different disciplines with one 200 level or higher
No more than 5 Credits in Cultural Competency Activities**

		(Foreign Language recommended)	3	
			3	
			3	

SELF AND SOCIETY COMPETENCY – Minimum 9 Credits from two different disciplines with one 200 level or higher

			3	
			3	
			3	

**DIVERSITY – Competency met by 2 courses designated as Global and U.S. Diversity is satisfied by:
These courses can be met through the Culture and Self and Society Competency requirements.**

Tier 3 Application Competencies

COLLABORATION COMPETENCY – Competency met by 2 courses contained in the Major or Business Core

ISIN 300 and MGMT 350

PROBLEM SOLVING COMPETENCY – Competency met by 2 courses contained in the Major or Business Core

ISIN 300 and MGMT 350

MACRO Stamp with MATH at 115 and ENGL 311 or ENGL 321 or ENGL 325 satisfies General Education

Total Credits 123: General Education Credits - 40, Business Courses Credits - 15, ISI Major Core Credits – 51, Directed Elective Credits – 5, Concentration Credits – 12

Freshman Seminar Requirement, FSUS 100, is satisfied by:

INFORMATION SECURITY AND INTELLIGENCE – 123 Credits

Bachelor of Science (BS)

CURRENT CHECKSHEET

College of Business

Major Requirements – 51 Credits Required (these courses ARE used to calculate the major 2.0 GPA requirement)			Crs.	Gr
Business Course Requirements – 15 credits required				
ACCT	201	Principles of Financial Accounting (MATH 109 or 110 w/C- or higher or MATH 114, 115, 116, 117, 118, 119, 120, 126, 130, 132, or 135 or Math ACT 19 or SAT 500)	3	
STQM	260	Introduction to Statistics (MATH 114, 115, 116, 120, 126, 130, 132, or 135, w/C- or higher or Math ACT 24 or SAT (post-2016) 580 or SAT (pre-2016) 560)	3	
MGMT	301	Applied Management (None)	3	
MKTG	321	Principles of Marketing (ENGL 150 w/ C- or higher and Sophomore Status)	3	
MGMT	350	Management Metrics and Decision Making (None)	3	
Major Course Requirements – 51 credits required				
ISIN	200	Secure Digital Technologies (None)	3	
STQM	270	Introduction to Data Mining (STQM 260 or COHP 350 or MATH 251 or MFGE 341 or PSYC 210 or SOCY 371 w/ C- or higher)	3	
ISIN	300	Link and Visual Analysis (None)	3	
ISIN	301	Data Intelligence Competitive Theory (ISIN 300)	3	
ISIN	306	Security Informatics (Sophomore Status or Instructor Permission)	3	
ISIN	308	Principles of Information Security (ISIN 200 or Instructor Permission)	3	
DFOR	310	Digital Forensics and Analysis (ISIN 121 or ISIN 308 w/C or higher)	3	
ISIN	312	Applications of Information Security ((ISIN 305 or ISIN 306) and ISIN 308)	3	
ISIN	317	Fraud Examination (None)	3	
PROJ	320	Project Management Fundamentals (Sophomore Status)	3	
ISIN	325	Database Security (Sophomore Status)	3	
STQM	360	Risk Analysis and Strategy (STQM 260 w/C- or higher)	3	
ISIN	380	Current Issues in Information Security and Intelligence (ISIN 308)	3	
ISIN	409	Network Forensics and Analysis (ISIN 200 and ISIN 308 w/C- or higher)	3	
ISIN	429	Legal and Ethical Issues in Information Security (Sophomore Status)	3	
ISIN	491	ISI Internship (Junior or Senior Status)	3	
ISIN	499	Capstone Experience (Instructor Approval and Senior Status)	3	
Directed Electives – 5 credits required				
			3	
			2	
Select One Concentration from List Below, or a Custom Concentration May Be Developed with Advisor Approval (all classes and concentrations may not be available at all campuses)				
DIGITAL FORENSICS CONCENTRATION (DGFN) – (12 credits required)				
CITS	270	Network+ (CITS 160 or ISIN 200 w/C or higher)	3	
DFOR	315	Advanced Digital Forensics (DFOR 310 w/C or higher)	3	
ISIN	335	Pen Testing and Cloud Security (ISIN 312)	3	
		Directed Elective	3	
PENETRATION TESTING AND SECURE SOFTWARE CONCENTRATION (PTSS) – (12 credits required)				
DFOR	315	Advanced Digital Forensics (DFOR 310)	3	
ISIN	335	Pen Testing and Cloud Security (ISIN 312)	3	
ISIN	430	Pen Testing and Mobile Security (ISIN 312 and ISIN 325)	3	
		Directed Elective	3	

INFORMATION SECURITY AND INTELLIGENCE – 123 Credits

Bachelor of Science (BS)

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DATA MINING CONCENTRATION (DTMN) – This concentration is available at the main Big Rapids Campus Only – 12 credits required				
STQM	322	Inferential Statistics (STQM 260 w/C- or higher)	3	
STQM	342	Data Mining Tools (STQM 270 w/C- or higher)	3	
ISIN	335	Pen Testing and Cloud Security (ISIN 312)	3	
STQM	380	Data Mining Processes (STQM 342 w/C- or higher)	3	
NETWORK SECURITY CONCENTRATION (NWSC) – 12 credits required				
CITS	270	Network + (CITS 160 or ISIN 200 w/C or higher)	3	
CITS	280	Linux Administration (ISYS 105 or ISYS 105 competency or CITS 160 or ISIN 200 w/C or higher)	3	
		Directed Elective	3	
		Directed Elective	3	
CUSTOM CONCENTRATION (CUST) or APPROVED MINOR – Advisor Approval Required – 12 Credits required				
			3	
			3	
			3	
			3	
FOREIGN LANGUAGE CONCENTRATION (FRL) – 12 credits required				
		Foreign Language (transfer)	12	

ADDITIONAL GRADUATION REQUIREMENTS

Students must:

1. maintain a 2.00 cumulative GPA in all FSU courses
2. have 40 credits at the 300/400 level
3. have 30 credits of Ferris classes (FSU Residency requirement), 30 credit hours must be Ferris classes.
4. have a minimum 120 total credits to earn a bachelor degree
5. maintain a 2.00 cumulative GPA in the major, which includes the business courses, major, electives and concentration

NOTICE: Students who return to the university after an interrupted enrollment (not including summer semester) must normally meet the requirements of the curriculum, which are in effect at the time of their return, not the requirements which were in effect when they were originally admitted.

INFORMATION SECURITY AND INTELLIGENCE – 123 Credits

Bachelor of Science (BS)

CURRENT CHECKSHEET

College of Business

Semester-By-Semester Layout of Classes

FIRST YEAR

Fall Semester

Class	Credits
COMM 105 or COMM 121	3
MATH 114 or MATH 115	3-4
Culture Competency	3
Self and Society Competency	3
Total Credits	12-13

Spring Semester

Class	Credits
ENGL 150	3
Natural Science Competency	3 or 4
Culture Competency	3
Self and Society Competency	3
Total Credits	12-13

Summer Semester

Class	Credits
ENGL 250	3
Culture Competency (200 level)	3
Self and Society Competency (200 Level)	3
Natural Science Competency w/ Lab	4
Total Credits	13

NOTE: Although taking classes during summer semester of your first year in the program is optional, doing so will expedite the completion of your degree.

SECOND YEAR

Fall Semester

Class	Credits
ISIN 306	3
ISIN 308	3
ISIN 200	3
ISIN 325	3
Total Credits	12

Spring Semester

Class	Credits
MKTG 321	3
STQM 260	3
DFOR 310	3
Concentration Course or Directed Elective	3
Total Credits	12

Summer Semester

Class	Credits
ISIN 317	3
ISIN 300	3
MGMT 301	3
Total Credits	9

NOTE: Although taking classes during summer semester of your first year in the program is optional, doing so will expedite the completion of your degree.

THIRD YEAR

Fall Semester

Class	Credits
STQM 270	3
ENGL 311 or 321 or 325	3
MGMT 350	3
Concentration Course or Directed Elective	3
Total Credits	12

Spring Semester

Class	Credits
ISIN 301	3
PROJ 320	3
ISIN 380	3
Concentration Course or Directed Elective	3
Total Credits	12

Summer Semester

Class	Credits
ISIN 429	3
ISI Internship	3
Concentration Course or Directed Elective	3
Total Credits	9

FOURTH YEAR

Fall Semester

Class	Credits
ACCT 201	3
STQM 360	3
Concentration Course or Directed Elective	3
Concentration Course or Directed Elective	3
Total Credits	12

Spring Semester

Class	Credits
ISIN 499	3
ISIN 312	3
Concentration Course or Directed Elective	3
ISIN 409	3
Total Credits	12

Summer Semester

Class	Credits
Total Credits	

INFORMATION SECURITY AND INTELLIGENCE – 123 Credits

Bachelor of Science (BS)

CURRENT CHECKSHEET

College of Business

DEGREE OUTCOMES

1. Theory and Practice - Work as a member of an information security and/or intelligence team and effectively integrate theories and practice in an ISI environment
2. Digital devices - Theorize ways digital devices could be used for security and criminal activity and collect and process digital information in support of an investigation or hypothesis
3. Security Risk Analysis - Develop skills for evaluating organizational structure, environment, and planning strategies for security risk and analyze the effectiveness of a security plan against the methods used by organized crime, gangs and terrorist organizations.
4. Data Bases - Design, construct and maintain databases in a format consistent with data mining. Analyze these structures in a temporal manner and present findings using a variety of methods including visual analysis tools and techniques.
5. Event Analysis - Recognize the potential for multiple explanations for events and information and be able to analyze and describe the accuracy of the information.
6. Forensic Tools - Utilize digital forensic tools and encryption technology to reconstruct information and recover lost or deleted files in a variety of digital platforms and settings using appropriate methodologies.
7. Networks and Devices - Set up computer networks and peripheral devices, install and maintain software; demonstrate how to handle, transport, utilize and safeguard digital devices and information.
8. ISI Lifecycle - Demonstrate knowledge of concepts and methodologies in information security and the Information Security Lifecycle (Protection) including information security administration, Security+ and CISSP.
9. Digital Forensics Concentration - Demonstrate knowledge of concepts and methodologies of incidence response, cyber forensics (acquisition, preservation, analysis, and presentation of evidence) and the information security lifecycle including cyber laws,
10. GIS and Data Mining Concentration – Demonstrate knowledge of business intelligence and GIS data and the evaluation of analytical data used in strategic decision making including knowledge discovery, tracking, managing and understanding organized data. Students will construct GIS and data mining environments using appropriate tools, techniques, decision support systems, and emerging trends.
11. Sustainability - To be able to obtain the faculty resources for continued growth both in numbers and in locations. Currently over 1/2 of the classes taught for both graduate and undergraduate programs is being serviced by adjuncts. Adding to this problem is the issue is the fact that there is no system in place to properly integrate the adjunct into the team and to ensure they are mentored and teaching the outcomes required.

ADMISSION REQUIREMENTS

New Students SAT Scores

- Minimum 3.0 high school GPA
- Minimum ACT composite score of 22 and ACT Math score of 22 or SAT minimum math score of 550.

Transfer Students

- Combined college or university GPA of 3.0 (on a 4.0 scale) from all institutions attended. GPA based on completion of 24 credit hours or more.
- Completion of the transfer equivalency for FSU's MATH 115 with a grade of "C" or higher or have either a minimum ACT Math score of 22 or minimum SAT Math score of 550.
- Additional requirements: All students applying for admission to the ISI program will have to submit a 750 to 1,000 word essay that addresses the following: Who they are and why they desire admission to the ISI program, description of a personal quality, talent, accomplishment, contribution, or experience, and a description of someone that influenced them and why.

INFORMATION SECURITY AND INTELLIGENCE (ISIN) – 120 CREDITS
2019-2020

Bachelor of Science (BS)

PROPOSED CHECKSHEET

College of Business

Student Name	Student ID

UNIVERSITY REQUIREMENTS
FIRST YEAR SEMINAR REQUIREMENT (FSUS 100 OR EQUIVALENT)

All First-Time-In-Any-College Freshman (FTIAC's) must complete a one-credit FSUS 100 course, or its equivalent. Additional information and the definition of FTIAC for FSUS purposes can be found in the: [Ferris State University Academic Affairs FSUS Policy](#)

Prefix	Code	Course Title	Credits	Grade

UNIVERSITY GENERAL EDUCATION REQUIREMENTS

(Prerequisites are shown in parentheses)

Courses in this section are required to satisfy the University General Education Requirements for a bachelor's degree. The University General Education requirements can be found on the: [Ferris State University General Education Requirements Webpage](#)

COMMUNICATION COMPETENCY – 12 CREDITS REQUIRED (OR THEIR EQUIVALENT)

Prefix	Code	Course Title	Credits	Grade
CHOOSE 1 OF 2	COMM 105	Interpersonal Communication (None)	3	
	COMM 121	Fundamentals of Public Speaking (None)	3	
ENGL	150	English 1 (ENGL 074 or English ACT 14 or (Pre-2016) Reading SAT 370 or (Post-2016) ERW SAT 450 or TOEFL Internet Total Score 61 or MSU-ELT Composite 73 or IELTS Overall 5.5)	3	
ENGL	250	English 2 (ENGL 150 with C- or higher)	3	
CHOOSE 1 OF 3	ENGL 311	Advanced Technical Writing (ENGL 211 or 250 with C or higher)	3	
	ENGL 321	Advanced Composition (ENGL 211 or 250 with C or higher)	3	
	ENGL 325	Advanced Business Writing (ENGL 211 or 250 with C or higher)	3	

QUANTITATIVE LITERACY COMPETENCY – 3 CREDITS REQUIRED (OR THEIR EQUIVALENT)

Prefix	Code	Course Title	Credits	Grade
CHOOSE 1 OF 2	MATH 114	Quantitative Reasoning for Professionals 2 ((MATH 109 or 110 with C- or higher or Math ACT 19 or (Pre-2016) Math SAT 460 or (Post-2016) Math SAT 500) and (ENGL 074 or English ACT 14 or (Pre-2016) Reading SAT 370 or (Post-2016) ERW SAT 450); if Math ACT 24 or SAT 580 or higher, student must substitute General Education Elective credits)	4	
	MATH 115	Intermediate Algebra (MATH 109 or 110 with C- or higher or Math ACT 19 or (Pre-2016) Math SAT 460 or (Post-2016) Math SAT 500; if Math ACT 24 or SAT 580 or higher, student must substitute General Education Elective credits)	3	

NATURAL SCIENCES COMPETENCY – 6 CREDITS REQUIRED

Two courses are required with a minimum of 6 credits: must have at least one lab course.

Prefix	Code	Course Title	Credits	Grade

INFORMATION SECURITY AND INTELLIGENCE (ISIN) – 120 CREDITS

Bachelor of Science (BS)

PROPOSED CHECKSHEET

2019-2020

College of Business

CULTURE COMPETENCY – 9 CREDITS REQUIRED

Three courses are required with a minimum of 9 credits: must be from two different disciplines, have at least one 200 level or higher course, and have no more than 5 credits from Cultural Competency Activities. *A foreign language course is recommended.*

Prefix	Code	Course Title	Credits	Grade
			[200+]	

SELF AND SOCIETY COMPETENCY – 9 CREDITS REQUIRED

Three courses are required with a minimum of 9 credits: must be from two different disciplines and have at least one 200 level or higher course.

Prefix	Code	Course Title	Credits	Grade
ECON	221	Principles of Macroeconomics (MATH 109 or 110 with C- or higher or (MATH 114, 115, 116, 117, 118, 119, 120, 122, or 126 or Math ACT 19 or (Pre-2016) Math SAT 460 or (Post-2016) Math SAT 500))	3	

DIVERSITY COMPETENCY – 2 COURSES REQUIRED

If not met by courses taken for Culture, Self and Society, or Michigan Transfer Agreement (MTA), a student must have one course with the Global Diversity attribute and one course with the U.S. Diversity attribute. Some courses include both Global Diversity and U.S. Diversity attributes. Courses with both attributes satisfies the entire Diversity competency.

Prefix	Code	Course Title	Credits	Grade
		[Global Diversity]		
		[U.S. Diversity]		

COLLABORATION COMPETENCY – 2 COURSES REQUIRED

If not met by courses taken in the bachelor degree program, a student must have two courses with the Collaboration attribute. Some courses include both Collaboration and Problem Solving attributes. Of the required courses in this specific program, these courses will meet the Collaboration requirement:

- ISIN 300 - Link and Visual Analysis
- ~~MGMT 350 - Management Metrics and Decision Making~~
- MKTG 321 - Principles of Marketing
- PROJ 320 - Project Management Fundamentals

PROBLEM SOLVING COMPETENCY – 2 COURSES REQUIRED

If not met by courses taken in the bachelor degree program, a student must have two courses with the Problem Solving attribute. Some courses include both Collaboration and Problem Solving attributes. Of the required courses in this specific program, these courses will meet the Problem Solving requirement:

- ACCT 201 - Principles of Financial Accounting
- ISIN 300 - Link and Visual Analysis
- ~~MGMT 350 - Management Metrics and Decision Making~~
- MKTG 321 - Principles of Marketing
- PROJ 320 - Project Management Fundamentals

INFORMATION SECURITY AND INTELLIGENCE (ISIN) – 120 CREDITS

Bachelor of Science (BS)

PROPOSED CHECKSHEET

2019-2020

College of Business

ALL MAJOR REQUIREMENTS – 83 CREDITS REQUIRED

(Prerequisites are shown in parentheses)

These courses are used to calculate the major 2.0 GPA requirement.

MAJOR COURSES – 51 CREDITS REQUIRED

Prefix	Code	Course Title	Credits	Grade
ISIN	121	Digital Security Awareness (None)	3	
ISIN	200	Secure Digital Technologies (ISIN 121 with C- or higher)	3	
ISIN	209	Network Security (ISIN 200 with C- or higher)	3	
STQM	270	Introduction to Data Mining (COHP 350, MATH 251, MFGE 341, PSYC 210, SOCY 371, or STQM 260 with C- or higher)	3	
ISIN	300	Link and Visual Analysis (None)	3	
ISIN	301	Data Intelligence Competitive Theory (ISIN 300)	3	
ISIN	306	Security Informatics (Sophomore Status or Instructor Permission)	3	
ISIN	308	Principles of Information Security (ISIN 200 or Instructor Permission)	3	
DFOR	310	Digital Forensics and Analysis (ISIN 121 or 308 with C or higher)	3	
ISIN	312	Applications of Information Security ((ISIN 305 or 306) and ISIN 308)	3	
ISIN	317	Fraud Examination (None)	3	
PROJ	320	Project Management Fundamentals (Sophomore Status)	3	
ISIN	325	Database Security (Sophomore Status)	3	
STQM	360	Risk Analysis and Strategy (STQM 260 with C- or higher)	3	
ISIN	380	Current Issues in Information Security and Intelligence (ISIN 308)	3	
ISIN	409	Network Forensics and Analysis (ISIN 200 and 308 both with C- or higher)	3	
ISIN	429	Legal and Ethical Issues in Information Security (Sophomore Status)	3	
ISIN	491	ISI Internship (Junior Status)	3	
ISIN	499	Capstone Experience (Senior Status and Instructor Approval)	3	

BUSINESS COURSE REQUIREMENTS – 15 CREDITS REQUIRED

Prefix	Code	Course Title	Credits	Grade
ACCT	201	Principles of Financial Accounting (MATH 109 or 110 with C- or higher or (MATH 114, 115, 116, 117, 118, 119, 120, 126, 130, 132, or 135 or Math ACT 19 or (Pre-2016) Math SAT 460 or (Post-2016) Math SAT 500))	3	
STQM	260	Introduction to Statistics (MATH 114, 115, 116, 120, 126, 130, 132, or 135 with C- or higher or Math ACT 24 or (Pre-2016) Math SAT 560 or (Post-2016) Math SAT 580)	3	
MGMT	301	Applied Management (None)	3	
MKTG	321	Principles of Marketing (ENGL 150 with C- or higher and Sophomore Status)	3	
MGMT	350	Management Metrics and Decision Making (None)	3	

DIRECTED ELECTIVES – 5 CREDITS REQUIRED

Prefix	Code	Course Title	Credits	Grade

INFORMATION SECURITY AND INTELLIGENCE (ISIN) – 120 CREDITS

Bachelor of Science (BS)

PROPOSED CHECKSHEET

2019-2020

College of Business

CONCENTRATIONS – 12 CREDITS REQUIRED

(Prerequisites are shown in parentheses)

Choose one concentration below or a custom concentration may be developed. Requires advisor approval.

It is important to note that all courses and concentrations may not be available at all campuses.

DIGITAL FORENSICS AND PENETRATION TESTING CONCENTRATION (XXXX) – 12 CREDITS REQUIRED

Prefix	Code	Course Title	Credits	Grade
DFOR	315	Advanced Digital Forensics (DFOR 310 with C or higher)	3	
ISIN	335	Pen Testing and Cloud Security (ISIN 312)	3	
ISIN	430	Pen Testing and Mobile Security (ISIN 312 and 325)	3	
DFOR	454	CyberSec Incident Response (DFOR 315)	3	

DATA MINING CONCENTRATION (DTMN) – 12 CREDITS REQUIRED – AVAILABLE MAIN BIG RAPIDS CAMPUS ONLY

Prefix	Code	Course Title	Credits	Grade
STQM	322	Inferential Statistics (STQM 260 with C- or higher)	3	
ISIN	335	Pen Testing and Cloud Security (ISIN 312)	3	
STQM	342	Data Mining Tools (STQM 270 with C or higher)	3	
STQM	380	Data Mining Processes (STQM 342 with C- or higher)	3	

DIGITAL FORENSICS CONCENTRATION (DGFN) – 12 CREDITS REQUIRED

Prefix	Code	Course Title	Credits	Grade
CITS	270	Network+ (CITS 160 or ISIN 200 with C or higher)	3	
DFOR	315	Advanced Digital Forensics (DFOR 310 with C or higher)	3	
ISIN	335	Pen Testing and Cloud Security (ISIN 312)	3	
		Directed Elective	3	

FOREIGN LANGUAGE CONCENTRATION (FRL) – 12 CREDITS REQUIRED

Prefix	Code	Course Title	Credits	Grade

PENETRATION TESTING AND SECURE SOFTWARE CONCENTRATION (PTSS) – 12 CREDITS REQUIRED

Prefix	Code	Course Title	Credits	Grade
DFOR	315	Advanced Digital Forensics (DFOR 310)	3	
ISIN	335	Pen Testing and Cloud Security (ISIN 312)	3	
ISIN	430	Pen Testing and Mobile Security (ISIN 312 and 325)	3	
		Directed Elective	3	

NETWORK SECURITY CONCENTRATION (NWSC) – 12 CREDITS REQUIRED

Prefix	Code	Course Title	Credits	Grade
CITS	270	Network+ (CITS 160 or ISIN 200 with C or higher)	3	
CITS	280	Linux Administration (ISYS 105 or ISYS 105 Competency or CITS 160 or ISIN 200 with C or higher)	3	
		Directed Elective	3	
		Directed Elective	3	

PROPOSED CHECKSHEET

CUSTOM CONCENTRATION (CUST) OR MINOR (ADVISOR APPROVAL) – 12 CREDITS REQUIRED

Prefix	Code	Course Title	Credits	Grade

NOTES

- Students who return to the university after an interrupted enrollment (not including summer semester) must normally meet the requirements of the curriculum which are in effect at the time of their return, not the requirements which were in effect when they were originally admitted.
- MACRO Stamp with MATH 115 and ENGL 311, 321, and 325 satisfies General Education requirements.
- Although taking classes during summer semester of your first year in the program is optional, doing so will expedite the completion of your degree.

5-YEAR BACHELOR AND MASTER OF SCIENCE INFORMATION SECURITY & INTELLIGENCE PROGRAM

Students may apply to the Masters of Information Security & Intelligence (MISI) program at the end of their junior year. If admitted, the student may substitute the following courses within their Bachelors degree:

- MISI 629 Legal and Ethics for ISIN 429 Legal and Ethics
- PROJ 640 Project Management for PROJ 320 Project Management

ADMISSION REQUIREMENTS

New Students

- Minimum 3.0 High School GPA (on a 4.0 scale)
- Minimum Composite ACT score of 22 and Math ACT score of 22 or SAT minimum Math score of 550.
- All students applying for admission to the ISI program will have to submit a 750 to 1,000-word essay that addresses the following: Who they are and why they desire admission to the ISI program, description of a personal quality, talent, accomplishment, contribution, or experience, and a description of someone that influenced them and why.

Transfer Students

- Combined college or university GPA of 3.0 (on a 4.0 scale) from all institutions attended. GPA based on completion of 24 credit hours or more.
- Completion of the transfer equivalency for FSU's MATH 115 with a grade of C or higher or have either a minimum Math ACT score of 22 or minimum Math SAT score of 550.
- All students applying for admission to the ISI program will have to submit a 750 to 1,000-word essay that addresses the following: Who they are and why they desire admission to the ISI program, description of a personal quality, talent, accomplishment, contribution, or experience, and a description of someone that influenced them and why.

DEGREE OUTCOMES

1. Theory and Practice - Work as a member of an information security and/or intelligence team and effectively integrate theories and practice in an ISI environment
2. Digital Devices - Theorize ways digital devices could be used for security and criminal activity and collect and process digital information in support of an investigation or hypothesis
3. Security Risk Analysis - Develop skills for evaluating organizational structure, environment, and planning strategies for security risk and analyze the effectiveness of a security plan against the methods used by organized crime, gangs and terrorist organizations.
4. Databases - Design, construct and maintain databases in a format consistent with data mining. Analyze these structures in a temporal manner and present findings using a variety of methods including visual analysis tools and techniques.
5. Event Analysis - Recognize the potential for multiple explanations for events and information and be able to analyze and describe the accuracy of the information.
6. Forensic Tools - Utilize digital forensic tools and encryption technology to reconstruct information and recover lost or deleted files in a variety of digital platforms and settings using appropriate methodologies.
7. Networks and Devices - Set up computer networks and peripheral devices, install and maintain software; demonstrate how to handle, transport, utilize and safeguard digital devices and information.
8. ISI Lifecycle - Demonstrate knowledge of concepts and methodologies in information security and the Information Security Lifecycle (Protection) including information security administration, Security+ and CISSP.
9. Digital Forensics Concentration - Demonstrate knowledge of concepts and methodologies of incidence response, cyber forensics (acquisition, preservation, analysis, and presentation of evidence) and the information security lifecycle including cyber laws,
10. GIS and Data Mining Concentration - Demonstrate knowledge of business intelligence and GIS data and the evaluation of analytical data used in strategic decision making including knowledge discovery, tracking, managing and understanding organized data. Students will construct GIS and data mining environments using appropriate tools, techniques, decision support systems, and emerging trends.
11. Sustainability - To be able to obtain the faculty resources for continued growth both in numbers and in locations. Currently over half of the classes taught for both graduate and undergraduate programs is being serviced by adjuncts. Adding to this problem is the fact that there is no system in place to properly integrate the adjunct into the team and to ensure they are mentored and teaching the outcomes required.

GRADUATION REQUIREMENTS**In addition to meeting all the programmatic requirements, students must:**

1. Meet University General Education requirements.
2. Earn a minimum of 120 credits.
3. Maintain a 2.00 or higher cumulative FSU GPA.
4. Earn 30 credits from FSU (Residency).
5. Earn 40 credits of 300 level or higher courses.
6. Maintain a 2.00 cumulative GPA in the major, which includes business, major, **elective**, and concentration courses.

CONTACT INFORMATION

COLLEGE: College of Business
DEPARTMENT/SCHOOL: AFIS/College of Business

PHONE: 231-591-2434
EMAIL: afis@ferris.edu

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INFORMATION SECURITY AND INTELLIGENCE (ISIN) – 120 CREDITS

Bachelor of Science (BS)

PROPOSED CHECKSHEET

2019-2020

College of Business

SEMESTER LAYOUT OF COURSES - EXCLUDING SUMMER SEMESTERS**FIRST YEAR**

Fall Courses	Credits
COMM 105 or 121	3
Culture Competency	3
ENGL 150	3
ISIN 121	3
MATH 114 or 115	3-4
Total Credits	15-16

Spring Courses	Credits
ENGL 250	3
ISIN 200	3
Natural Sciences Competency	3
Self and Society Competency	3
STQM 260	3
Total Credits	15

Summer Courses	Credits
Total Credits	

SECOND YEAR

Fall Courses	Credits
Culture Competency	3
ISIN 308	3
ECON 221	3
ISIN 209	3
ISIN 306	3
Total Credits	15

Spring Courses	Credits
ACCT 201	3
ISIN 300	3
Self and Society Competency	3
DFOR 310	3
ENGL 311, 321, or 325	3
Total Credits	15

Summer Courses	Credits
Total Credits	

THIRD YEAR

Fall Courses	Credits
MGMT 301	3
MKTG 321	3
Natural Sciences Competency	4
ISIN 325	3
STQM 270	3
Total Credits	16

Spring Courses	Credits
ISIN 312	3
ISIN 409	3
STQM 360	3
ISIN 380	3
Concentration Course 1	3
Total Credits	15

Summer Courses	Credits
Total Credits	

FOURTH YEAR

Fall Courses	Credits
Culture Competency 200+	3
Concentration Course 2	3
Concentration Course 3	3
ISIN 301	3
ISIN 317	3
Total Credits	15

Spring Courses	Credits
ISIN 499	3
ISIN 429 or MISI 629	3
PROJ 320 or 640	3
Concentration Course 4	3
Total Credits	12

Summer Courses	Credits
Total Credits	

INFORMATION SECURITY AND INTELLIGENCE (ISIN) – 120 CREDITS

Bachelor of Science (BS)

PROPOSED CHECKSHEET

2019-2020

College of Business

SEMESTER LAYOUT OF COURSES - INCLUDING SUMMER SEMESTERS**FIRST YEAR**

Fall Courses	Credits
Culture Competency	3
ENGL 150	3
ISIN 121	3
COMM 121 or 105	3
MATH 114 or 115	3-4
Total Credits	15-16

Spring Courses	Credits
Self and Society Competency	3
ENGL 250	3
ISIN 200	3
Natural Sciences Competency	3
STQM 260	3
Total Credits	15

Summer Courses	Credits
ISIN 306	3
ISIN 317	3
Total Credits	6

SECOND YEAR

Fall Courses	Credits
Self and Society Competency	3
ISIN 308	3
ECON 221	3
ISIN 209	3
ENGL 311, 321, or 325	3
Total Credits	15

Spring Courses	Credits
ACCT 201	3
Culture Competency 200+	3
ISIN 301	3
DFOR 310	3
ISIN 380	3
Total Credits	15

Summer Courses	Credits
ISIN 300	3
STQM 360	3
Total Credits	6

THIRD YEAR

Fall Courses	Credits
MGMT 301	3
MKTG 321	3
Natural Sciences Competency	4
Culture Competency	3
STQM 270	3
Total Credits	16

Spring Courses	Credits
ISIN 312	3
ISIN 409	3
Concentration Course 1	3
ISIN 429 or MISI 629	3
Concentration Course 2	3
Total Credits	15

Summer Courses	Credits
ISIN 491	3
ISIN 325	3
Total Credits	6

FOURTH YEAR

Fall Courses	Credits
ISIN 499	3
PROJ 320 or 640	3
Concentration Course 3	3
Concentration Course 4	3
Total Credits	12

Spring Courses	Credits
Total Credits	

Summer Courses	Credits
Total Credits	

Student Name: _____

Student ID: _____

Prerequisites shown in parenthesis

REQUIRED COURSES – 12 Credits Required			Crs.	Gr.
ISIN	200	Secure Digital Technologies (None)	3	
ISIN	308	Principles of Information Security (ISIN 200 or Instructor Permission)	3	
DFOR	310	Digital Forensics and Analysis (ISIN 121 or ISIN 308 w/C or higher)	3	
ISIN	325	Database Security (Sophomore Status)	3	

ELECTIVES – 6 Credits Required (Advisor Approval required)				
CHOOSE TWO	ISIN 300	Link and Visual Analysis (None)	3	
	ISIN 301	Data Intelligence Competitive Theory (ISIN 300)	3	
	ISIN 305	Developing a Web Presence (Sophomore Status or Instructor Permission)	3	
	ISIN 306	Security Informatics (Sophomore Status or Instructor Permission)	3	
	ISIN 312	Applications of Information Security ((ISIN 305 or ISIN 306) and ISIN 308)	3	
	DFOR 315	Advanced Digital Forensics (DFOR 310 w/C or higher)	3	
	ISIN 317	Fraud Examination (None)	3	
	ISIN 335	Pen Testing and Cloud Security (ISIN 312)	3	
	ISIN 380	Current Issues in Information Security and Intelligence (ISIN 308)	3	
	ISIN 409	Network Forensics and Analysis (ISIN 200 and ISIN 308 w/C- or higher)	3	
	ISIN 429	Legal and Ethical Issues in Information Security (Sophomore Status)	3	
	ISIN 430	Pen Testing and Mobile Security (ISIN 312 and ISIN 325)	3	

CUSTOM ELECTIVE COURSES RECOMMENDED BY THE ISI FACULTY ADVISOR			Crs.	Gr.

DECLARATION OF MINOR

In addition to their major the student must declare the minor with the advisor **AFIS Department, (231) 591-2434, BUS 212.**

STUDENT Signature

Date

MINOR ADVISOR Signature

Date

DEPARTMENT HEAD/CHAIR Signature

Date

INFORMATION SECURITY AND INTELLIGENCE – 21 Credits

Minor

CURRENT CHECKSHEET

College of Business

ADMISSION REQUIREMENTS

Any person who is admitted to a Ferris State University Bachelor's degree program is welcome to obtain this minor.

ADDITIONAL GRADUATION REQUIREMENTS

1. At least one-half of the credits must be Ferris State University credits.
2. A maximum of 1/3 of the credits, but no more than 7 credits, may overlap with the student's major.
3. A minimum of fifty percent (50%) of the courses in the minor must be at the 200 or above level.
4. A 2.00 GPA is required for completion of the Minor.

Notes:

1. Upon declaration of Minor, a Program Change is submitted to declare the Minor.
2. Minor requirements must be completed prior to, or concurrently with completion of a Bachelor degree.
3. A term prior to completion of the Minor, the student will log into MyFSU, and complete the "Apply for Graduation". You will receive an email back with the next steps to take. Once this is done the Graduation Secretary will notify the Registrar who will note the completion of the Minor.

NOTICE: Students who return to the university after an interrupted enrollment (not including summer semester) must normally meet the requirements of the curriculum, which are in effect at the time of their return, not the requirements which were in effect when they were originally admitted.

INFORMATION SECURITY AND INTELLIGENCE (ISIN) – 18 CREDITS
2019-2020

Minor

PROPOSED CHECKSHEET

College of Business

Student Name	Student ID

ALL MINOR REQUIREMENTS – 18 CREDITS REQUIRED

(Prerequisites are shown in parentheses)

MINOR COURSES – 12 CREDITS REQUIRED

Prefix	Code	Course Title	Credits	Grade
ISIN	121	Digital Security Awareness (None)	3	
ISIN	200	Secure Digital Technologies (ISIN 121 with C- or higher)	3	
ISIN	308	Principles of Information Security (ISIN 200 or Instructor Permission)	3	
DFOR	310	Digital Forensics and Analysis (ISIN 121 or 308 with C or higher)	3	
ISIN	325	Database Security (Sophomore Status)	3	

ELECTIVES – 6 CREDITS REQUIRED (ADVISOR APPROVAL)

Prefix	Code	Course Title	Credits	Grade
CHOOSE 2 OF 15	ISIN 209	Network Security (ISIN 200 with C- or higher)	3	
	ISIN 300	Link and Visual Analysis (None)	3	
	ISIN 301	Data Intelligence Competitive Theory (ISIN 300)	3	
	ISIN 305	Developing a Web Presence (Sophomore Status or Instructor Permission)	3	
	ISIN 306	Security Informatics (Sophomore Status or Instructor Permission)	3	
	ISIN 312	Applications of Information Security ((ISIN 305 or 306) and 308)	3	
	DFOR 315	Advanced Digital Forensics (DFOR 310 with C or higher)	3	
	ISIN 317	Fraud Examination (None)	3	
	ISIN 325	Database Security (Sophomore Status)	3	
	ISIN 335	Pen Testing and Cloud Security (ISIN 312)	3	
	ISIN 380	Current Issues in Information Security and Intelligence (ISIN 308)	3	
	ISIN 409	Network Forensics and Analysis (ISIN 200 and 308 both with C- or higher)	3	
	ISIN 429	Legal and Ethical Issues in Information Security (Sophomore Status)	3	
	ISIN 430	Pen Testing and Mobile Security (ISIN 312 and 325)	3	
	DFOR 454	CyberSec Incident Response (DFOR 315)	3	
	<i>Directed Elective</i>	3		

NOTES

- Students who return to the university after an interrupted enrollment (not including summer semester) must normally meet the requirements of the curriculum which are in effect at the time of their return, not the requirements which were in effect when they were originally admitted.
- Upon declaration of Minor, a program change is submitted to declare the Minor.
- Minor requirements must be completed prior to, or concurrently with completion of a Bachelor degree.
- A term prior to completion of the minor, log into MyFSU and complete the "Apply for Graduation". You will receive an email back with the next steps to take. Once this is done the Graduation Secretary will notify the Registrar who will note the completion of the Minor.

ADMISSION REQUIREMENTS

New Students

- Student must be admitted to the university and pursuing a baccalaureate degree.

Transfer Students

- Student must be admitted to the university and pursuing a baccalaureate degree.

GRADUATION REQUIREMENTS

In addition to meeting all the programmatic requirements, students must:

1. Maintain a 2.00 or higher cumulative FSU GPA.
2. Earn 50% of the minor credits from FSU (Residency).
3. Earn a maximum of 1/3 credits, but no more than 7 credits, that overlap with their major.
4. Earn 50% of the credits at the 200 level or higher.

CONTACT INFORMATION

COLLEGE: College of Business
 DEPARTMENT/SCHOOL: AFIS/College of Business

PHONE: 231-591-2434
 EMAIL: afis@ferris.edu

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DECLARATION OF MINOR

Role	Signature	Date
Student		
Minor Advisor		
Department Head/Chair		

Course Information Form

Form EF

Form current on 12/10/18

I. ACTION:

- CREATE, MODIFY, DELETE, OR Update Assessment Software
Desired Term Effective: ▼

II. COURSE IDENTIFICATION (Current): DFOR 454

If deleting a course STOP HERE.

III. COURSE DATA - TO MODIFY, INDICATE THE LETTER(S) OF ALL CHANGES (A-R): _____

ONLY complete the fields that are proposing changes.

- A. Course Title (30 Characters) Cybersec Incident Response
- B. Contact Hours: Lab: 0 Lecture: 3 Seminar: ▼
- C. If not LEC/LAB/SEM, Choose from drop down [See Definitions in Appendix E]: ▼
- D. College Code: BU - College of Business
- E. Department Code: AFIS - Account, Finance, Info Systems
- F. Credit Hours - Fixed: 3
Credit Hours – Variable (numeric range): _____
- G. Hours may be repeated for additional credit: No
If yes, max times repeated _____ OR max credits awarded _____
- H. Levels: Undergraduate
- I. Grade Method: Standard Letter Grading
- J. Does the proposed course replace an equivalent course? No
If yes, enter equivalent course: Course Prefix, Course Number – Course Title
- K. Term(s) Offered: All
- L. Max Section Enrollment: 20
- M. Pre-requisite Course(s) AND minimum grade requirement in parenthesis for each course. If left blank default will be D- and if more than one course, use "AND" or "OR" to separate: DFOR 315
- N. Other Pre-requisites or restrictions: _____
- O. Co-requisite: _____
- P. Course/Catalog Description (125 words)
- i. Current Description: Continued Education in digital forensics and Incident response, diving deeper in techniques learned from DFOR 310 and DFOR 315. This course will focus on key elements such as the forensic analysis of databases, further understanding of file systems, cloud forensics, malware forensics, network forensics, current topics in forensics, and proper incident reporting techniques.
 - ii. Proposed Description: _____
- Q. Course Outcomes and Assessment Plan
- i. Current Outcomes/Assessment: 1. Demonstrate ability to develop appropriate incident response plan after evaluation of intrusion and/or digital crime.
2. Perform proper extraction and forensic imaging of mobile devices, hard disks, and servers to international forensic standards.
3. Demonstrate ability to perform analysis of forensic images based on Incident scenarios and incident acquisitions.
4. Apply proper analysis and demonstrate ability to report incident findings in report form by creating analysis report showing comprehension of all outcomes in a final forensic report.
 - ii. Proposed Outcomes/Assessment: _____
- R. Course Outline including Time Allocation

i. Current Outline & Time Allocation: _____

ii. Proposed Outline & Time Allocation:

Incident Response and Planning 30%

1- Incident Response Planning

2- Fundamentals of Incident Response, terminology, process, and digital evidence collection

Forensic imaging 20%

1. Fundamentals of forensic imaging

2. Understanding process of the international standard of forensic imaging of multiple platforms

Analysis and Reporting 50%

1. Continued analysis practices for digital analysis of multiple platforms to include mobile, databases, and servers.

2. Fundamentals of forensic reporting and analysis reporting to international standard

UCC Chair Signature & Date:

Academic Affairs Approval Signature & Date:

OFFICE OF THE REGISTRAR USE ONLY

Date Rec'd:

Date Completed:

Entered: SCACRSE, SCADETL, SCARRES, SCAPREQ

Course Information Form

Form EF

Form current on 12/10/18

I. ACTION:

- CREATE, MODIFY, DELETE, OR Update Assessment Software
Desired Term Effective: 201908

II. COURSE IDENTIFICATION (Current): ISIN, 200 Digital Security Technologies If deleting a course STOP HERE.

III. COURSE DATA - TO MODIFY, INDICATE THE LETTER(S) OF ALL CHANGES (A-R): M ONLY complete the fields that are proposing changes.

- A. Course Title (30 Characters) _____
- B. Contact Hours: Lab: ▼ Lecture: ▼ Seminar: ▼
- C. If not LEC/LAB/SEM, Choose from drop down [See Definitions in Appendix E]: ▼
- D. College Code: ▼
- E. Department Code: Choose a Department from the dropdown
- F. Credit Hours - Fixed: ▼
Credit Hours – Variable (numeric range): _____
- G. Hours may be repeated for additional credit: Choose an item
If yes, max times repeated _____ OR max credits awarded _____
- H. Levels: ▼
- I. Grade Method: ▼
- J. Does the proposed course replace an equivalent course? ▼
If yes, enter equivalent course: Course Prefix, Course Number – Course Title
- K. Term(s) Offered: _____
- L. Max Section Enrollment: _____
- M. Pre-requisite Course(s) AND minimum grade requirement in parenthesis for each course. If left blank default will be D- and if more than one course, use "AND" or "OR" to separate: ISIN 121 C- or higher
- N. Other Pre-requisites or restrictions: _____
- O. Co-requisite: _____
- P. Course/Catalog Description (125 words)
i. Current Description: _____
ii. Proposed Description: _____
- Q. Course Outcomes and Assessment Plan
i. Current Outcomes/Assessment: _____
ii. Proposed Outcomes/Assessment: _____
- R. Course Outline including Time Allocation
i. Current Outline & Time Allocation: _____
ii. Proposed Outline & Time Allocation: •

UCC Chair Signature & Date:

Academic Affairs Approval Signature & Date:

OFFICE OF THE REGISTRAR USE ONLY

Date Rec'd: _____ Date Completed: _____ Entered: SCACRSE, SCADETL, SCARRES, SCAPREQ

Course Information Form

Form EF

Form current on 12/10/18

I. ACTION:

CREATE, MODIFY, DELETE, OR Update Assessment Software

Desired Term Effective: 201908

II. COURSE IDENTIFICATION (Current): ISIN, 209 - Network Security

If deleting a course STOP HERE.

III. COURSE DATA - TO MODIFY, INDICATE THE LETTER(S) OF ALL CHANGES (A-R): _____

ONLY complete the fields that are proposing changes.

A. Course Title (30 Characters) Network Security

B. Contact Hours: Lab: ▼ Lecture: 3 Seminar: ▼

C. If not LEC/LAB/SEM, Choose from drop down [See Definitions in Appendix E]: ▼

D. College Code: BU - College of Business

E. Department Code: AFIS - Account, Finance, Info Systems

F. Credit Hours - Fixed: 3

Credit Hours – Variable (numeric range): _____

G. Hours may be repeated for additional credit: No

If yes, max times repeated _____ OR max credits awarded _____

H. Levels: Undergraduate

I. Grade Method: Standard Letter Grading

J. Does the proposed course replace an equivalent course? No

If yes, enter equivalent course: Course Prefix, Course Number – Course Title

K. Term(s) Offered: Spring

L. Max Section Enrollment: 20

M. Pre-requisite Course(s) AND minimum grade requirement in parenthesis for each course. If left blank default will be D- and if more than one course, use "AND" or "OR" to separate: ISIN 200 C- or higher

N. Other Pre-requisites or restrictions: _____

O. Co-requisite: _____

P. Course/Catalog Description (125 words)

i. Current Description: _____

ii. Proposed Description: This course introduces network management and security concepts including establishing and maintaining network standards and governance procedures. Students will gain exposure to configuring and managing network and device configurations that support organizational objectives in a secure environment. Typically offered Spring semester. (Prerequisite ISIN 200 C- or higher)

Q. Course Outcomes and Assessment Plan

i. Current Outcomes/Assessment: _____

ii. Proposed Outcomes/Assessment:

1. Develop and maintain network standards and governance procedures.

Assessment: Classroom exercises, assignments and/or assessments.

2. Identify, configure and manage network configurations and devices in a secure environment.

Assessment: Classroom exercises, assignments and/or assessments.

3. Utilize network devices and architectural configurations to establish resilient networks.

Assessment: Classroom exercises, assignments, assessments

4. Identify and understand network security monitoring process and methodology.

Assessment: Classroom exercises, assignments, assessments.

R. Course Outline including Time Allocation

i. Current Outline & Time Allocation: _____

ii. Proposed Outline & Time Allocation: •

Network Security and Cybersecurity Concepts

50%

- o Introduction to networking, network security terminology and concepts
- o Implement network security standards and governances
- o Introduction to network security practices and common network cybersecurity attacks

•

Network Investigations and Fundamentals 30%

- o Fundamentals of networking security and network investigations
- o Understanding core networking principles, technologies and Technologies

Identify Network Security Solutions 20%

- o Introduction to network security analysis tools
- o Introduction to network security monitoring

UCC Chair Signature & Date:

Academic Affairs Approval Signature & Date:

OFFICE OF THE REGISTRAR USE ONLY

Date Rec'd: _____ Date Completed: _____ Entered: SCACRSE, SCADETL, SCARRES, SCAPREQ

Course Information Form

Form EF

Form current on 12/10/18

I. ACTION:

CREATE, MODIFY, DELETE, OR Update Assessment Software

Desired Term Effective: 201908

II. COURSE IDENTIFICATION (Current): ISIN, 409 Network Forensics

If deleting a course STOP HERE.

III. COURSE DATA - TO MODIFY, INDICATE THE LETTER(S) OF ALL CHANGES (A-R): B, M

ONLY complete the fields that are proposing changes.

A. Course Title (30 Characters) _____

B. Contact Hours: Lab: ▼ Lecture: 3 Seminar: ▼

C. If not LEC/LAB/SEM, Choose from drop down [See Definitions in Appendix E]: ▼

D. College Code: ▼

E. Department Code: Choose a Department from the dropdown

F. Credit Hours - Fixed: ▼

Credit Hours – Variable (numeric range): _____

G. Hours may be repeated for additional credit: Choose an item

If yes, max times repeated _____ OR max credits awarded _____

H. Levels: ▼

I. Grade Method: ▼

J. Does the proposed course replace an equivalent course? ▼

If yes, enter equivalent course: Course Prefix, Course Number – Course Title

K. Term(s) Offered: _____

L. Max Section Enrollment: _____

M. Pre-requisite Course(s) AND minimum grade requirement in parenthesis for each course. If left blank default will be D- and if more than one course, use "AND" or "OR" to separate: ISIN 209 C- or higher

N. Other Pre-requisites or restrictions: _____

O. Co-requisite: _____

P. Course/Catalog Description (125 words)

i. Current Description: _____

ii. Proposed Description: _____

Q. Course Outcomes and Assessment Plan

i. Current Outcomes/Assessment: _____

ii. Proposed Outcomes/Assessment: _____

R. Course Outline including Time Allocation

i. Current Outline & Time Allocation: _____

ii. Proposed Outline & Time Allocation: •

UCC Chair Signature & Date:

Academic Affairs Approval Signature & Date:

OFFICE OF THE REGISTRAR USE ONLY

Date Rec'd: _____ Date Completed: _____

Entered: SCACRSE, SCADETL, SCARRES, SCAPREQ

From: [Rusty A Leonard](#)
To: [Jim J Furstenberg](#)
Cc: [FSU Curriculum](#)
Subject: 19-059
Date: Thursday, April 25, 2019 10:48:47 AM
Attachments: [19-059 Portfolio Information SecurityIntelligence \(ISIN\) 4.24.19.pdf](#)

Jim,

Because of the many concerns raised by the CCC and the responses that require significant changes to the proposal, I am pulling it from today's UCC agenda because it is not ready. These changes to the proposal are needed prior to the UCC acting. As you may be aware, this proposal requires Academic Senate action, and the last Senate meeting for the semester is 4/30.

RAM will continue to work on the changes and will be contacting you over the summer.

Please create a revised E/F in reference to DFOR 454 and create a new E/F for the prerequisite course for ISIN 409.

Best regards,

Russell A. Leonard, Jr., Ph.D.
Professor
UCC Chair
Ferris State University
College of Engineering Technology

From: [Rusty A Leonard](#)
To: [FSU Curriculum](#)
Subject: FW: Revised submission: curriculum proposal for Economics minor
Date: Tuesday, September 17, 2019 10:55:33 AM
Attachments: [Econ.Circ.proposal.9.16.pdf](#)

Forwarding

Russell A. Leonard, Jr., Ph.D.
Professor and UCC Chair
Ferris State University
College of Engineering Technology
School of Automotive and Heavy Equipment
(231) 591-2357

From: Alex C Cartwright <AlexCartwright@ferris.edu>
Date: Monday, September 16, 2019 at 8:35 PM
To: Rusty A Leonard <RustyLeonard@ferris.edu>
Cc: Gayle S Lopez <GayleLopez@ferris.edu>
Subject: Revised submission: curriculum proposal for Economics minor

Hello Rusty,

Last semester, Mark Brandly submitted a proposal to 'clean up' our Economics minor. The proposal was tabled by the UCC (please see your 4/26/19 email to Mark Brandly below). Because Mark Brandly is on sabbatical this semester, I have worked with the Econ faculty to revise the proposal in accordance with the concerns you raised. Attached, please find the updated proposal.

Please don't hesitate to contact me for clarification or additional questions.

Thank you for your time and attention.

Best, -Alex

Alexander C. Cartwright, Ph.D.
Assistant Professor of Economics
College of Business
BUS 337
Ferris State University

From: Mark L Brandly <MarkBrandly@ferris.edu>
Sent: Friday, April 26, 2019 2:53 PM
To: Roy L McLean <RoyMcLean@ferris.edu>; Jennifer Dirmeyer <JenniferDirmeyer@ferris.edu>; Alex C Cartwright <AlexCartwright@ferris.edu>; Tyler A Watts <TylerWatts@ferris.edu>
Subject: curriculum proposal for the minor

Today, the UCC did not approve the proposal for the econ minor (adding two courses, changing some outcomes, etc.). The proposal will not go into effect this fall. See the comments below for details.

Mark

Mark,

Your curriculum proposal, 19-051 was tabled by the UCC because of the concerns listed below. This proposal requires an Academic Senate vote and because it missed the deadline for the last Senate meeting on 4/30/19, the implementation date will no longer be 201908.

The concerns of the UCC revolved around outcomes and not having a means of assessment. The concerns are:

1. ECON 321 - lower-level outcomes and no assessment plan.
2. ECON 440 - percentage discrepancy, lower-level outcomes and no assessment plan.
3. ECON 451 - missing course outline or time allocation and no assessment plan.
4. ECON 460 - no assessment plan and while you are in there, clean up the outcomes as identified by your CCC.
"The course outcome language could be streamlined by focusing on the verb 'analyze' in outcomes 1 and 2 and evaluate in outcomes 3 and 4."
5. Since we are revising, we will submit a form C for you.

You may want to align the verbs with a higher level of Bloom's taxonomy. Please refer to the FSU Assessment webpage: https://www.ferris.edu/HTMLS/administration/academicaffairs/Initiatives/Assessment/Related_Links.htm and focus on the links under "Learning Outcomes and Related Constructs."

Here is an example of an assessment plan:

Assessment Method:

Students will take a version of the ACS (American Chemical Society) First Term General Chemistry standardized examination at the end of CHEM 121. Each question that requires the students to apply specific knowledge is analyzed.

Assessment Method Category:

Test - External - Post or Pre/Post

Criterion for Success:

Students will average at least 65% on the selected questions

When you finish these revisions, please send them to me.

Best regards,

Russell A. Leonard, Jr., Ph.D.
Professor
UCC Chair
Ferris State University
College of Engineering Technology

From: [Rusty A Leonard](#)
To: [Joe J Pole](#); [Emily L Zyla](#); [Katherine B Harris](#); [Greg S Wellman](#); [Roy L McLean](#); [Frances K Rosen](#); [David A McCall](#); [Leonard R Johnson](#); [Michelle L Johnson](#); [Amy L Buse](#); [Elise M Gramza](#); [FSU Curriculum](#)
Subject: FW: Action Required - Curriculum Proposal 19-051
Date: Wednesday, April 24, 2019 3:38:55 PM
Attachments: [COB College Curriculum Meeting.4.17.19 \(002\).docx](#)
[19-051 Portfolio Economics \(ECON\) Minor Revision V2.pdf](#)

UCC,

Please review this proposal for tomorrow. See attachments and email string below.

Thanks,

Russell A. Leonard, Jr., Ph.D.
Professor
UCC Chair
Ferris State University
College of Engineering Technology

From: Mark L Brandly <MarkBrandly@ferris.edu>
Date: Tuesday, April 23, 2019 at 2:17 PM
To: Rusty A Leonard <RustyLeonard@ferris.edu>
Subject: RE: Action Required - Curriculum Proposal 19-051

Attached is the proposal with the program faculty vote count. The vote was 5-0 in favor of the proposal.

I've also attached the CCC concerns. Here are our responses.

1. I don't see how deleting ECON 303 affects the upcoming COB proposal. The class is never taught and has nothing to do with the COB core and no other programs requires this course.
2. Regarding the ECON 321 outcomes, the Economics faculty is satisfied with the outcomes as listed in the EF form.
3. Regarding the ECON 440 outcomes, the Economics faculty is satisfied with the outcomes as listed in the EF form.
4. Regarding ECON 451, the only change we are proposing is the change to the course outcomes, subsection Q. We are not proposing changes to the course outline or time allocation.
5. Regarding ECON 460, the Economics faculty is satisfied with the outcomes listed in the EF form.
6. Regarding the assessment for ECON 321, 440, 451, and 460, all of the courses will have Exams and or Quizzes and also written assignments as the tools of assessment.

Will this be satisfactory?

Mark Brandly

From: Rusty A Leonard
Sent: Monday, April 22, 2019 12:56 PM
To: Mark L Brandly <MarkBrandly@ferris.edu>
Cc: Alexander W Manga <AlexanderManga@ferris.edu>; FSU Curriculum <fsucurriculum@ferris.edu>
Subject: Action Required - Curriculum Proposal 19-051

Mark,

FSU Curriculum received your proposal with signatures, but the following must be addressed before the UCC will act on your proposal.

1. Missing program faculty vote count. Add the vote count.
2. Missing the concerns and proposer response for the concerns of the five CCC members who voted with concerns. Send the CCC chair summary of the concerns with your response.

The last face-to-face meeting of the UCC is 4/25/19. Let's keep this proposal moving forward by responding ASAP.

Best regards,

Russell A. Leonard, Jr., Ph.D.
Professor
UCC Chair
Ferris State University
College of Engineering Technology

From: [Jim J Furstenberg](#)
To: [Amy L Buse](#)
Cc: [Greg Gogolin](#); [Jerry J Emerick](#); [FSU Curriculum](#)
Subject: RE: proposal 19-059 follow up
Date: Friday, September 6, 2019 4:04:50 PM

The Information Security & Intelligence Program Outcomes:

Program Educational Objectives

1. Effectively work and communicate as an ethical member of an information security and/or intelligence team, and effectively integrate theories and practice in an ISI environment.
2. Develop skills for evaluating organizational structure, environment, and planning strategies for security risk, and analyze the effectiveness of a security plan against the methods used by organized crime, gangs and terrorist organizations.
3. Utilized continuous improvement strategies for personal and professional growth.
4. Demonstrate knowledge of concepts and methodologies in information security and the Information Security Lifecycle (Protection) including information security administration, Security+ and CISSP.
5. Recognize the potential for multiple explanations for events and information and be able to analyze and describe the accuracy of the information in a variety of contexts and situations.

From: Amy L Buse <AmyBuse@ferris.edu>
Sent: 6 September, 2019 4:03 PM
To: Jim J Furstenberg <JimFurstenberg@ferris.edu>
Cc: Greg Gogolin <GregGogolin@ferris.edu>; Jerry J Emerick <JerryEmerick@ferris.edu>; FSU Curriculum <fsucurriculum@ferris.edu>
Subject: RE: proposal 19-059 follow up

Jim,

When you send me the new outcomes, we will put them on the checksheet and them to the proposal packet.

Amy



Dr. Amy L.R. Buse | Professor/ MyDegree Project Director

College of Business | Academic Affairs | Ferris State University

119 South Street | Big Rapids, MI 49307

(231) 591-5435 AmyBuse@ferris.edu

From: Jim J Furstenberg
Sent: Thursday, September 5, 2019 12:15 PM
To: Amy L Buse <AmyBuse@ferris.edu>
Cc: Greg Gogolin <GregGogolin@ferris.edu>; Jerry J Emerick <JerryEmerick@ferris.edu>

Subject: Re: proposal 19-059 follow up

Amy,

I left you a voicemail as well. ABET program outcomes need to get added to the from A. I will send them to you, would you be so kind as to add them if I send them to you?

Also wanted to check to see where this proposal is in the pipeline.

Assistant Professor Jim Furstenberg

From: Greg Gogolin <GregGogolin@ferris.edu>
Date: Wednesday, September 4, 2019 at 7:24 PM
To: Jim Furstenberg <JimFurstenberg@ferris.edu>, Jerry Emerick <JerryEmerick@ferris.edu>
Subject: Re: proposal 19-059 follow up

Can the updated program outcomes be added to this proposal on the Form A?

Get [Outlook for iOS](#)

From: Jim J Furstenberg <JimFurstenberg@ferris.edu>
Sent: Wednesday, September 4, 2019 8:59:25 AM
To: Greg Gogolin <GregGogolin@ferris.edu>; Jerry J Emerick <JerryEmerick@ferris.edu>
Subject: FW: proposal 19-059 follow up

FYI.....

From: Amy L Buse <AmyBuse@ferris.edu>
Sent: 4 September, 2019 8:52 AM
To: Jim J Furstenberg <JimFurstenberg@ferris.edu>
Subject: RE: proposal 19-059 follow up

I am so sorry – I don't know. We met on 7/15/19 to make sure we had all the changes correct and then I lost track. I will double check.



Dr. Amy L.R. Buse | Professor/ MyDegree Project Director

College of Business | Academic Affairs | Ferris State University

119 South Street | Big Rapids, MI 49307

(231) 591-5435 AmyBuse@ferris.edu

From: Jim J Furstenberg
Sent: Wednesday, September 4, 2019 7:07 AM
To: Amy L Buse <AmyBuse@ferris.edu>

Subject: FW: proposal 19-059 follow up

Good morning Amy, just checking on this proposal?

From: Amy L Buse <AmyBuse@ferris.edu>

Sent: 15 July, 2019 1:27 PM

To: Jim J Furstenberg <JimFurstenberg@ferris.edu>

Cc: FSU Curriculum <fsucurriculum@ferris.edu>

Subject: RE: proposal 19-059 follow up

Jim,

RAM met today regarding proposal 19-059. I have a few questions and an update for you.

My questions are:

1. ISIN-BS
 - a. In the Self and Society category we are changing ECON 221 to a choice between ECON 221 and 222, correct?
 - b. In what semester on the semester-layout do you want ISIN 491?
 - c. You want COMM 221 added to the Communication Competency section so there will be three choices COMM 105, 121 and 221, correct?
 - d. STQM 380 needs to be off the checksheet. It is in the Data Mining Concentration – what would you like to replace it with? (wasn't sure if that is where the Directed Elective statement was needed but as I thought that was for the associate degree)
 - e. Not a question, but so you know, we will double the total credits once we make the changes.
2. ISIN-AAS
 - a. This has STQM 380, you wanted that removed and added an elective. So to make sure that will be 6 credits of electives, correct?
3. ISIN-Minor
 - a. I don't see any additional changes from the original changes in the proposal. Did we miss anything?
4. General
 - a. 1. Do you want to see the three checksheets again to make sure we have all correct?

Update

1. A new Form B is needed to be sent to the Marketing department due the addition of ECON 221 or 222. This will be sent out the first day of classes in the fall semester. As soon as the is returned (or after 10 business days) the entire proposal will be created again. We felt there were so many changes it would be easier for all readers of the proposal to have a new proposal with clean language instead of statements all over talking about the changers and the reader has to find them in the additional files of the portfolio.
2. RAM will create the new packet, get your approval and then new signatures will have to be gotten on the Form A. I believe no new votes are needed, just new signatures. Then as soon as the Dean signs the form A it will be ready to go to the UCC.

If you would like to talk let me know.



Dr. Amy L.R. Buse | Professor/ MyDegree Project Director

College of Business | Academic Affairs | Ferris State University

119 South Street | Big Rapids, MI 49307

(231) 591-5435 AmyBuse@ferris.edu

From: Jim J Furstenberg

Sent: Wednesday, July 10, 2019 6:27 AM

To: Amy L Buse <AmyBuse@ferris.edu>

Subject: proposal 19-059 follow up

Good morning Amy,

Just checking to make sure this is all set and on the agenda for the first meetgin in the fall. We are getting classes created for the Spring term.

Jim

1 04/23/2019

2 Proposal: 19-059 – Information Security & Intelligence Program Resolution/Responses

3 **Therese Cook – Department Concern**

Darlene J Waring

From: Teresa K Cook
Sent: Tuesday, February 26, 2019 3:09 PM
To: Darlene J Waring
Cc: Greg Gogolin
Subject: RE: Proposal 19-059 - ISIN Program Revision - Approval Needed By Friday, March 1st

I vote to support with concerns, which are:

What is ABET?

The proposal does not mention adding ECON as a required Self and Society but it is included on the Proposed Check sheet.

Because of the changes being proposed for ECON by the COB Core, it is very important that the Proposed Check sheet indicates either Microeconomics (ECON 201) OR the option to allow either ECON 201 or ECON 202 is noted as the required course. In the proposed curriculum, Macroeconomics will be the second course in the sequence. I do know that other ABET certified programs have gone with the either/or option.

Greg – this is what I wanted to talk with you about but then had to leave for an appointment.

Teresa K. Cook, PhD, CMA
Professor
Accountancy, Finance and Information Systems
Ferris State University
119 South Street, IRC 212T
Big Rapids, MI 49307
Telephone: 231-591-3167

4

5 **Resolution / Response**

6 **RAM to add the ECON 221 OR ECON 222 - OR option to the check sheets - per Dr.**
7 **Gogolin and Theresa Cook meeting.**

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1 **COB College Curriculum Meeting Concerns**

2 Regarding Form A, #2 – In proposer’s item #2, the word ‘need’ should be replaced with
3 ‘needed’ in “a lower level ‘Network Security’ course is need as a prerequisite to the”

4

5 **Response/Revision**

6

7 2) Create a second course in Network Security. The program currently has a 400-level
8 course, ISIN 409 Network Forensics. Per feedback from ABET, NSA, and our
9 program advisors, as well as the growing complexity of Networking and networking
10 forensics, a lower level “Network Security” course is needed as a prerequisite to the
11 ISIN 409-level course.

12

13 In proposer’s item #5, “ISIN” should be added to the last sentence, “[a]dding in 121
14 brings us to 121 credits.”

15

16 **Response/Revision**

17

18 5) Remove the 5 credits of Directed Electives from the ISI program major core and
19 MGMT350. ABET review indicated that we need to increase our coverage of
20 technical coursework as we minimally meet the 45-hour requirement. Dropping
21 MGMT 350 and replacing with ISIN 209 as well as dropping the 5 ISIN directed
22 electives. Adding in ISIN 121 brings us to 121 credits.

23

24

25 Moreover, the committee calculates the total number of credits for the bachelor’s degree
26 is 120 instead of 121 as specified in the proposal.

27 **Response/Revision**

28

29 ISIN 491 was missing from ISIN-BS Semester Courses layout excluding summer-
30 making check sheet total to equal = 121. Will correct check sheet

31

32 Additionally, ECON 221 is identified as an additional course in the program in the
33 proposed checklist, but it is not mentioned in Form A. Form A should reflect this
34 change.

35 **Response/Revision**

36 **Will correct Form A to reflect this**

37

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40 Regarding the proposed check sheets – Elies advises STQM 380 is no longer taught and
41 has been replaced by another course. The committee suggests STQM 380 be removed
42 from the proposed check sheet.

43 **Response/Revision**

44 **This will be replaced by directed elective**

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The committee notes that the total number of courses/credits laid out in the Semester Layout of Courses – Excluding Summer Semesters plan is 119. This is fewer credits than set forth on Form A.

Response/Revision

ISIN 491 was missing from ISIN-BS Semester Courses layout excluding summer-making check sheet total to equal = 121. Will correct check sheet

The committee supports the suggestion made by Amy Greene to add COMM 221 as a choice for communication competency.

Response/Revision

Will add COMM 221 as a choice for communication competency.

Steve S. provides additional explanation in response to the concerns raised by Gayle Lopez in Form B, indicating that the program feels the finance pieces previously addressed by MGMT 350 are addressed in PROJ 320.

Response/Revision

Students are required to take Project Management. This course exposes them to the understanding of project costs, budgets, finances and work break down structures etc., as well as various project management and management strategies

Regarding Form EF for DFOR 454 –
The name of the course should be included in II.

Response/Revision

This has been corrected. Please see the corrected form.

The course is missing the desired term effective information.

Response/Revision

This has been corrected. Please see the corrected form.

No assessment information is included in subsection Q.

Response/Revision

This has been corrected. Please see the corrected form.

Because this is a new course, information included in P(i) and Q(i) should be moved to the proposed sections, P(ii) and Q(ii).

Response/Revision

This has been corrected. Please see the corrected form.

1 The committee recommends the proposer consider reworking the outcomes to simplify
2 them and include higher order Bloom's taxonomy language.

3 **Response/Revision**

4 **This has been corrected. Please see the corrected form.**

5
6
7

8 Regarding Form EF for ISIN 209 – No assessment information is included in subsection
9 Q. The committee is concerned regarding the use of lower order Bloom's terms in the
10 first five of the course outcomes. The Committee suggests revising the outcomes to
11 include higher order Bloom's taxonomy language.

12 **Response/Revision**

13 **Section Q shows that assessment information is provided via “ Classroom exercises,
14 assignments and assessments”**

15

16 **Higher Order Blooms Taxonomy was used to change outcomes to;**

17

18 **Application of Network Security and Cybersecurity Concepts 50%**

- 19 o **Apply networking, network security terminology and concepts**
- 20 o **Analyze network security standards and governances**
- 21 o **Analyze network security practices and common network cybersecurity attacks**
- 22 •

23

23 **Network Investigations and Fundamentals 30%**

- 24 o **Evaluation of networking security and network investigations**
- 25 o **Application of core networking principles and technologies**

26

27 **Identify Network Security Solutions 20%**

- 28 o **Application of network security analysis tools**
- 29 o **Application of network security monitoring**

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ADMISSION REQUIREMENTSNew Students

- Minimum 3.0 High School GPA (on a 4.0 scale)
- Minimum ACT Composite score of 22 and ACT Math score of 22 or SAT minimum Math score of 550.

Transfer Students

- Combined college or university GPA of 3.0 (on a 4.0 scale) from all institutions attended. GPA based on completion of 24 credit hours or more.
- Students must have completed the transfer equivalency of FSU's MATH 115 with a grade of C or higher or have either a minimum ACT Math score of 22 or minimum SAT Math score of 550.
- Additional requirements: All students applying for admission to the ISI program will have to submit a 750 to 1,000 word essay that addresses the following: who they are and why they desire admission to the ISI program, description of a personal quality, talent, accomplishment, contribution or experience, and a description of someone that influenced them and why.

DEGREE OUTCOMES

1. Theory and Practice - Work as a member of an information security and/or intelligence team and effectively integrate theories and practice in an ISI environment.
2. Digital Devices - Theorize ways digital devices could be used for security and criminal activity and collect and process digital information in support of an investigation or hypothesis.
3. Security Risk Analysis - Develop skills for evaluating organizational structure, environment, and planning strategies for security risk and analyze the effectiveness of a security plan against the methods used by organized crime, gangs and terrorist organizations.
4. Databases - Design, construct and maintain databases in a format consistent with data mining. Analyze these structures in a temporal manner and present findings using a variety of methods including visual analysis tools and techniques.
5. Event Analysis - Recognize the potential for multiples explanations for events and information and be able to analyze and describe the accuracy of the information.
6. Forensic Tools - Utilize digital forensic tools and encryption technology to reconstruct information and recover lost or deleted files in a variety of digital platforms and settings using appropriate methodologies
7. Networks and Devices - Set up computer networks and peripheral devices, install and maintain software; demonstrate how to handle, transport, utilize and safeguard digital devices and information.
8. ISI Lifecycle - Demonstrate knowledge of concepts and methodologies in information security and the Information Security Lifecycle (Protection) including information security administration, Security+ and CISSP.
9. Digital Forensics - Demonstrate knowledge of concepts and methodologies of incidence response, cyber forensics (acquisition, preservation, analysis, and presentation of evidence) and the information security lifecycle including cyber laws, cybercrimes, incidence response, pre-incident preparation, detection, notification, initial response, strategic decisions, response, recovery, and reporting.
10. Data Mining - Demonstrate knowledge of business intelligence and the evaluation of analytical data used in tragic decision making including knowledge discovery, tracking, managing and understanding organized data.

INFORMATION SECURITY AND INTELLIGENCE (ISIN) – 60 CREDITS

Associate of Applied Science (AAS)

PROPOSED CHECKSHEET

2020-2021
College of Business**GRADUATION REQUIREMENTS**In addition to meeting all the programmatic requirements, students must:

1. Meet University General Education requirements.
2. Earn 15 credits from FSU (Residency).
3. Maintain a 2.00 or higher cumulative FSU GPA.
4. Earn a minimum of 60 credits.

CONTACT INFORMATION

COLLEGE: College of Business

PHONE: 231-591-2434

DEPARTMENT/SCHOOL: AFIS/College of Business

EMAIL: afis@ferris.edu

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SEMESTER LAYOUT OF COURSES**FIRST YEAR**

Fall Courses		Credits	Spring Courses		Credits	Summer Courses		Credits
COMM 105 or 121		3	ENGL 250		3	Culture Competency		3
MATH 114 or 115		3-4	ISIN 200		3			
Natural Sciences Competency		3-4	Self and Society Competency		3			
ENGL 150		3	STQM 260		3			
ISIN 121		3	ISIN 300		3			
Total Credits		15-17	Total Credits		15	Total Credits		3

SECOND YEAR

Fall Courses		Credits	Spring Courses		Credits	Summer Courses		Credits
ISIN 306		3	ISIN 312		3			
ISIN 308		3	DFOR 310		3			
ISIN 325		3	Elective Course (Advisor Approval)		3			
STQM 270 Culture Competency		3	Elective Course (Advisor Approval)		3			
Elective Course (Advisor Approval)		3						
Total Credits		15	Total Credits		12	Total Credits		



FERRIS STATE UNIVERSITY

INFORMATION SECURITY AND INTELLIGENCE (ISIN) – 120 CREDITS **2020-2021**

Bachelor of Science (BS)

PROPOSED CHECKSHEET

College of Business

Student Name	Student ID

UNIVERSITY REQUIREMENTS 39 42 CREDITS

FIRST YEAR SEMINAR REQUIREMENT (FSUS 100 OR EQUIVALENT)

All First-Time-In-Any-College Freshman (FTIAC's) must complete a one-credit FSUS 100 course, or its equivalent. Additional information and the definition of FTIAC for FSUS purposes can be found in the: [Ferris State University Academic Affairs FSUS Policy](#)

UNIVERSITY GENERAL EDUCATION REQUIREMENTS 39 40 CREDITS (Prerequisites are shown in parentheses)

Courses in this section are required to satisfy the University General Education Requirements for a bachelor's degree. The University General Education requirements can be found on the: [Ferris State University General Education Requirements Webpage](#)

COMMUNICATION COMPETENCY – 12 CREDITS REQUIRED (OR THEIR EQUIVALENT)

Prefix	Code	Course Title	Credits	Grade
CHOOSE 1 OF 2	COMM 105	Interpersonal Communication (None)	3	
	COMM 121	Fundamentals of Public Speaking (None)	3	
ENGL	150	English 1 (ENGL 074 or English ACT 14 or (Pre-2016) Reading SAT 370 or (Post-2016) ERW SAT 450 or TOEFL Internet Total Score 61 or MSUETL Composite 73 or IELTS Overall 5.5)	3	
ENGL	250	English 2 (ENGL 150 with C- or higher)	3	
CHOOSE 1 OF 3	ENGL 311	Advanced Technical Writing (ENGL 211 or 250 with C or higher)	3	
	ENGL 321	Advanced Composition (ENGL 211 or 250 with C or higher)	3	
	ENGL 325	Advanced Business Writing (ENGL 211 or 250 with C or higher)	3	

QUANTITATIVE LITERACY COMPETENCY – 3-4 CREDITS REQUIRED (OR THEIR EQUIVALENT)

Prefix	Code	Course Title	Credits	Grade
CHOOSE 1 OF 2	MATH 114	Quantitative Reasoning for Professionals 2 ((MATH 109 or 110 with C- or higher or Math ACT 19 or (Pre-2016) Math SAT 460 or (Post-2016) Math SAT 500) and (ENGL 074 or English ACT 14 or (Pre-2016) Reading SAT 370 or (Post-2016) ERW SAT 450); if Math ACT 24 or SAT 580 or higher, student must substitute General Education Elective credits)	4	
	MATH 115	Intermediate Algebra (MATH 109 or 110 with C- or higher or Math ACT 19 or (Pre-2016) Math SAT 460 or (Post-2016) Math SAT 500; if Math ACT 24 or SAT 580 or higher, student must substitute General Education Elective credits)	3	

NATURAL SCIENCES COMPETENCY – 6 CREDITS REQUIRED

Two courses are required with a minimum of 6 credits: must have at least one lab course.

Prefix	Code	Course Title	Credits	Grade
		[Lab]		

CULTURE COMPETENCY – 9 CREDITS REQUIRED

Three courses are required with a minimum of 9 credits: must be from two different disciplines, have at least one 200 level or higher course, and have no more than 5 credits from Cultural Competency Activities. *A foreign language course is recommended.*

Prefix	Code	Course Title	Credits	Grade
			[200+]	

SELF AND SOCIETY COMPETENCY – 9 CREDITS REQUIRED

Three courses are required with a minimum of 9 credits: must be from two different disciplines and have at least one 200 level or higher course.

Prefix	Code	Course Title	Credits	Grade
CHOOSE 1 OF 2	ECON 221	Principles of Macroeconomics (MATH 109 or 110 with C- or higher or (MATH 114, 115, 116, 117, 118, 119, 120, 122, or 126 or Math ACT 19 or (Pre-2016) Math SAT 460 or (Post-2016) Math SAT 500))		
	ECON 222	Principles of Microeconomics (ECON 221)	3	

DIVERSITY COMPETENCY – 2 COURSES REQUIRED

If not met by courses taken for Culture, Self and Society, or Michigan Transfer Agreement (MTA), a student must have one course with the Global Diversity attribute and one course with the U.S. Diversity attribute. Some courses include both Global Diversity and U.S. Diversity attributes. Courses with both attributes satisfies the entire Diversity competency.

Prefix	Code	Course Title	Credits	Grade
			[Global Diversity]	
			[U.S. Diversity]	

COLLABORATION COMPETENCY – 2 COURSES REQUIRED

If not met by courses taken in the bachelor degree program, a student must have two courses with the Collaboration attribute. Some courses include both Collaboration and Problem Solving attributes. Of the required courses in this specific program, these courses will meet the Collaboration requirement:

- ISIN 300 - Link and Visual Analysis
- ~~MGMT 350 - Management Metrics and Decision Making~~
- MKTG 321 - Principles of Marketing
- PROJ 320 - Project Management Fundamentals

PROBLEM SOLVING COMPETENCY – 2 COURSES REQUIRED

If not met by courses taken in the bachelor degree program, a student must have two courses with the Problem Solving attribute. Some courses include both Collaboration and Problem Solving attributes. Of the required courses in this specific program, these courses will meet the Problem Solving requirement:

- ACCT 201 - Principles of Financial Accounting
- ISIN 300 - Link and Visual Analysis
- ~~MGMT 350 - Management Metrics and Decision Making~~
- MKTG 321 - Principles of Marketing
- PROJ 320 - Project Management Fundamentals

INFORMATION SECURITY AND INTELLIGENCE (ISIN) – 120 CREDITS

Bachelor of Science (BS)

PROPOSED CHECKSHEET

2020-2021

College of Business

COLLEGE REQUIREMENTS 81 CREDITS REQUIRED

(Prerequisites are shown in parentheses)

These courses are used to calculate the major 2.0 GPA requirement.

MAJOR COURSES 57 CREDITS REQUIRED

Prefix	Code	Course Title	Credits	Grade
ISIN	121	Digital Security Awareness (None)	3	
ISIN	200	Secure Digital Technologies (ISIN 121 with C- or higher)	3	
ISIN	209	Network Security (ISIN 200 with C- or higher)	3	
STQM	270	Introduction to Data Mining (COHP 350, MATH 251, MFGE 341, PSYC 210, SOCY 371, or STQM 260 with C- or higher)	3	
ISIN	300	Link and Visual Analysis (None)	3	
ISIN	301	Data Intelligence Competitive Theory (ISIN 300)	3	
ISIN	306	Security Informatics (Sophomore Status or Instructor Permission)	3	
ISIN	308	Principles of Information Security (ISIN 200 or Instructor Permission)	3	
DFOR	310	Digital Forensics and Analysis (ISIN 121 or 308 with C or higher)	3	
ISIN	312	Applications of Information Security ((ISIN 305 or 306) and ISIN 308)	3	
ISIN	317	Fraud Examination (None)	3	
PROJ	320	Project Management Fundamentals (Sophomore Status)	3	
ISIN	325	Database Security (Sophomore Status)	3	
STQM	360	Risk Analysis and Strategy (STQM 260 with C- or higher)	3	
ISIN	380	Current Issues in Information Security and Intelligence (ISIN 308)	3	
ISIN	409	Network Forensics and Analysis (ISIN 200 and 308 both with C- or higher)	3	
ISIN	429	Legal and Ethical Issues in Information Security (Sophomore Status)	3	
ISIN	491	ISI Internship (Junior Status)	3	
ISIN	499	Capstone Experience (Senior Status and Instructor Approval)	3	

BUSINESS COURSE REQUIREMENTS 12 CREDITS REQUIRED

Prefix	Code	Course Title	Credits	Grade
ACCT	201	Principles of Financial Accounting (MATH 109 or 110 with C- or higher or (MATH 114, 115, 116, 117, 118, 119, 120, 126, 130, 132, or 135 or Math ACT 19 or (Pre-2016) Math SAT 460 or (Post-2016) Math SAT 500))	3	
STQM	260	Introduction to Statistics (MATH 114, 115, 116, 120, 126, 130, 132, or 135 with C- or higher or Math ACT 24 or (Pre-2016) Math SAT 560 or (Post-2016) Math SAT 580)	3	
MGMT	301	Applied Management (None)	3	
MKTG	321	Principles of Marketing (ENGL 150 with C- or higher and Sophomore Status)	3	
MGMT	350	Management Metrics and Decision Making (None)	3	

DIRECTED ELECTIVES 5 CREDITS REQUIRED

Prefix	Code	Course Title	Credits	Grade

INFORMATION SECURITY AND INTELLIGENCE (ISIN) – 120 CREDITS

Bachelor of Science (BS)

PROPOSED CHECKSHEET

2020-2021

College of Business

CONCENTRATIONS 12 CREDITS REQUIRED

(Prerequisites are shown in parentheses)

Choose one concentration below or a custom concentration may be developed. Requires advisor approval.

It is important to note that all courses and concentrations may not be available at all campuses.

DIGITAL FORENSICS AND PENETRATION TESTING CONCENTRATION (XXXX) – 12 CREDITS REQUIRED

Prefix	Code	Course Title	Credits	Grade
DFOR	315	Advanced Digital Forensics (DFOR 310 with C or higher)	3	
ISIN	335	Pen Testing and Cloud Security (ISIN 312)	3	
ISIN	430	Pen Testing and Mobile Security (ISIN 312 and 325)	3	
DFOR	454	CyberSec Incident Response (DFOR 315)	3	

DATA MINING CONCENTRATION (DTMN) – 12 CREDITS REQUIRED – AVAILABLE MAIN BIG RAPIDS CAMPUS ONLY

Prefix	Code	Course Title	Credits	Grade
STQM	322	Inferential Statistics (STQM 260 with C- or higher)	3	
ISIN	335	Pen Testing and Cloud Security (ISIN 312)	3	
STQM	342	Data Mining Tools (STQM 270 with C or higher)	3	
STQM	380	Data Mining Processes (STQM 342 with C- or higher)	3	
		Directed Elective	3	

~~DIGITAL FORENSICS CONCENTRATION (DGFN) – 12 CREDITS REQUIRED~~

Prefix	Code	Course Title	Credits	Grade
CITS	270	Network+ (CITS 160 or ISIN 200 with C or higher)	3	
DFOR	315	Advanced Digital Forensics (DFOR 310 with C or higher)	3	
ISIN	335	Pen Testing and Cloud Security (ISIN 312)	3	
		Directed Elective	3	

FOREIGN LANGUAGE CONCENTRATION (FRL) – 12 CREDITS REQUIRED

Prefix	Code	Course Title	Credits	Grade

~~PENETRATION TESTING AND SECURE SOFTWARE CONCENTRATION (PTSS) – 12 CREDITS REQUIRED~~

Prefix	Code	Course Title	Credits	Grade
DFOR	315	Advanced Digital Forensics (DFOR 310)	3	
ISIN	335	Pen Testing and Cloud Security (ISIN 312)	3	
ISIN	430	Pen Testing and Mobile Security (ISIN 312 and 325)	3	
		Directed Elective	3	

NETWORK SECURITY CONCENTRATION (NWSC) – 12 CREDITS REQUIRED

Prefix	Code	Course Title	Credits	Grade
CITS	270	Network+ (CITS 160 or ISIN 200 with C or higher)	3	
CITS	280	Linux Administration (ISYS 105 or ISYS 105 Competency or CITS 160 or ISIN 200 with C or higher)	3	
		Directed Elective	3	
		Directed Elective	3	

PROPOSED CHECKSHEET

CUSTOM CONCENTRATION (CUST) OR MINOR (ADVISOR APPROVAL) – 12 CREDITS REQUIRED

Prefix	Code	Course Title	Credits	Grade

NOTES

- Students who return to the university after an interrupted enrollment (not including summer semester) must normally meet the requirements of the curriculum which are in effect at the time of their return, not the requirements which were in effect when they were originally admitted.
- MACRO Stamp with MATH 115 and ENGL 311, 321, and 325 satisfies General Education requirements.
- Although taking classes during summer semester of your first year in the program is optional, doing so will expedite the completion of your degree.

5 YEAR BACHELOR AND MASTER OF SCIENCE IN INFORMATION SECURITY & INTELLIGENCE PROGRAM

Students may apply to the Masters of Information Security and Intelligence (MISI) program at the end of their junior year. If admitted, the student may substitute the following courses within their bachelor degree:

- MISI 629 (Legal, Ethical, and Fraud Issues) for ISIN 429 (Legal and Ethical Issues in Information Security)
- PROJ 640 (Project Management) for PROJ 320 (Project Management Fundamentals)

ADMISSION REQUIREMENTS

New Students

- Minimum 3.0 High School GPA (on a 4.0 scale)
- Minimum Composite ACT score of 22 and Math ACT score of 22 or SAT minimum Math score of 550.
- All students applying for admission to the ISI program will have to submit a 750 to 1,000-word essay that addresses the following: Who they are and why they desire admission to the ISI program, description of a personal quality, talent, accomplishment, contribution, or experience, and a description of someone that influenced them and why.

Transfer Students

- Combined college or university GPA of 3.0 (on a 4.0 scale) from all institutions attended. GPA based on completion of 24 credit hours or more.
- Completion of the transfer equivalency for FSU's MATH 115 with a grade of C or higher or have either a minimum Math ACT score of 22 or minimum Math SAT score of 550.
- All students applying for admission to the ISI program will have to submit a 750 to 1,000-word essay that addresses the following: Who they are and why they desire admission to the ISI program, description of a personal quality, talent, accomplishment, contribution, or experience, and a description of someone that influenced them and why.

DEGREE OUTCOMES

1. Theory and Practice - Work as a member of an information security and/or intelligence team and effectively integrate theories and practice in an ISI environment
2. Digital Devices - Theorize ways digital devices could be used for security and criminal activity and collect and process digital information in support of an investigation or hypothesis
3. Security Risk Analysis - Develop skills for evaluating organizational structure, environment, and planning strategies for security risk and analyze the effectiveness of a security plan against the methods used by organized crime, gangs and terrorist organizations.
4. Databases - Design, construct and maintain databases in a format consistent with data mining. Analyze these structures in a temporal manner and present findings using a variety of methods including visual analysis tools and techniques.
5. Event Analysis - Recognize the potential for multiple explanations for events and information and be able to analyze and describe the accuracy of the information.
6. Forensic Tools - Utilize digital forensic tools and encryption technology to reconstruct information and recover lost or deleted files in a variety of digital platforms and settings using appropriate methodologies.
7. Networks and Devices - Set up computer networks and peripheral devices, install and maintain software; demonstrate how to handle, transport, utilize and safeguard digital devices and information.
8. ISI Lifecycle - Demonstrate knowledge of concepts and methodologies in information security and the Information Security Lifecycle (Protection) including information security administration, Security+ and CISSP.
9. Digital Forensics Concentration - Demonstrate knowledge of concepts and methodologies of incidence response, cyber forensics (acquisition, preservation, analysis, and presentation of evidence) and the information security lifecycle including cyber laws,
10. GIS and Data Mining Concentration - Demonstrate knowledge of business intelligence and GIS data and the evaluation of analytical data used in strategic decision making including knowledge discovery, tracking, managing and understanding organized data. Students will construct GIS and data mining environments using appropriate tools, techniques, decision support systems, and emerging trends.
11. Sustainability - To be able to obtain the faculty resources for continued growth both in numbers and in locations. Currently over half of the classes taught for both graduate and undergraduate programs is being serviced by adjuncts. Adding to this problem is the fact that there is no system in place to properly integrate the adjunct into the team and to ensure they are mentored and teaching the outcomes required.

GRADUATION REQUIREMENTS**In addition to meeting all the programmatic requirements, students must:**

1. Meet University General Education requirements.
2. Earn a minimum of 120 credits.
3. Maintain a 2.00 or higher cumulative FSU GPA.
4. Earn 30 credits from FSU (Residency).
5. Earn 40 credits of 300 level or higher courses.
6. Maintain a 2.00 cumulative GPA in the major, which includes business, major, **elective**, and concentration courses.

CONTACT INFORMATION

COLLEGE: College of Business

DEPARTMENT/SCHOOL: AFIS/College of Business

PHONE: 231-591-2434

EMAIL: afis@ferris.edu

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INFORMATION SECURITY AND INTELLIGENCE (ISIN) – 120 CREDITS

Bachelor of Science (BS)

PROPOSED CHECKSHEET

2020-2021
College of Business**SEMESTER LAYOUT OF COURSES EXCLUDING SUMMER SEMESTERS****FIRST YEAR**

Fall Courses	Credits
COMM 105 or 121	3
Culture Competency	3
ENGL 150	3
ISIN 121	3
MATH 114 or 115	3-4
Total Credits	15-16

Spring Courses	Credits
ENGL 250	3
ISIN 200	3
Natural Sciences Competency	3
Self and Society Competency	3
STQM 260	3
Total Credits	15

Summer Courses	Credits
Total Credits	

SECOND YEAR

Fall Courses	Credits
Culture Competency	3
ISIN 308	3
ECON 221	3
ISIN 209	3
ISIN 306	3
Total Credits	15

Spring Courses	Credits
ACCT 201	3
ISIN 300	3
Self and Society Competency	3
DFOR 310	3
ENGL 311, 321, or 325	3
Total Credits	15

Summer Courses	Credits
Total Credits	

THIRD YEAR

Fall Courses	Credits
MGMT 301	3
MKTG 321	3
Natural Sciences Competency	4
ISIN 325	3
STQM 270	3
Total Credits	16

Spring Courses	Credits
ISIN 312	3
ISIN 409	3
STQM 360	3
ISIN 380	3
Concentration Course 1	3
Total Credits	15

Summer Courses	Credits
Total Credits	

FOURTH YEAR

Fall Courses	Credits
Culture Competency 200+	3
Concentration Course 2	3
Concentration Course 3	3
ISIN 301	3
ISIN 317	3
Total Credits	15

Spring Courses	Credits
ISIN 499	3
ISIN 429 or MISI 629	3
PROJ 320 or 640	3
Concentration Course 4	3
Total Credits	12

Summer Courses	Credits
Total Credits	

INFORMATION SECURITY AND INTELLIGENCE (ISIN) – 120 CREDITS

Bachelor of Science (BS)

PROPOSED CHECKSHEET

2020-2021
College of Business

SEMESTER LAYOUT OF COURSES INCLUDING SUMMER SEMESTERS

FIRST YEAR

Fall Courses	Credits	Spring Courses	Credits	Summer Courses	Credits
Culture Competency	3	Self and Society Competency	3	ISIN 306	3
ENGL 150	3	ENGL 250	3	ISIN 317	3
ISIN 121	3	ISIN 200	3		
COMM 121 or 105	3	Natural Sciences Competency	3		
MATH 114 or 115	3-4	STQM 260	3		
Total Credits	15-16	Total Credits	15	Total Credits	6

SECOND YEAR

Fall Courses	Credits	Spring Courses	Credits	Summer Courses	Credits
Self and Society Competency	3	ACCT 201	3	ISIN 300	3
ISIN 308	3	Culture Competency 200+	3	STQM 360	3
ECON 221	3	ISIN 301	3		
ISIN 209	3	DFOR 310	3		
ENGL 311, 321, or 325	3	ISIN 380	3		
Total Credits	15	Total Credits	15	Total Credits	6

THIRD YEAR

Fall Courses	Credits	Spring Courses	Credits	Summer Courses	Credits
MGMT 301	3	ISIN 312	3	ISIN 491	3
MKTG 321	3	ISIN 409	3	ISIN 325	3
Natural Sciences Competency	4	Concentration Course 1	3		
Culture Competency	3	ISIN 429 or MISI 629	3		
STQM 270	3	Concentration Course 2	3		
Total Credits	16	Total Credits	15	Total Credits	6

FOURTH YEAR

Fall Courses	Credits	Spring Courses	Credits	Summer Courses	Credits
ISIN 499	3				
PROJ 320 or 640	3				
Concentration Course 3	3				
Concentration Course 4	3				
Total Credits	12	Total Credits		Total Credits	

Student Name: _____

Student ID: _____

Prerequisites shown in parenthesis

REQUIRED COURSES – 12 Credits Required			Crs.	Gr.
ISIN	200	Secure Digital Technologies (None)	3	
ISIN	308	Principles of Information Security (ISIN 200 or Instructor Permission)	3	
DFOR	310	Digital Forensics and Analysis (ISIN 121 or ISIN 308 w/C or higher)	3	
ISIN	409	Network Forensics and Analysis (ISIN 200 and ISIN 308 w/C- or higher)	3	

CERTIFICATE OUTCOMES

1. Theory and Practice – Work as a member of an information security and/or intelligence team and effectively integrate theories and practice in an ISI environment.
2. Security Domain – Demonstrate knowledge of concepts and methodologies of the principles of information security objectives and the information security lifecycle.
3. Networks and Devices – Set up computer networks and peripheral devices, install and maintain software; demonstrate how to handle, transport, utilize and safeguard digital devices and information.
4. Digital Devices – Theorize ways digital devices could be used for security and criminal activity and collect and process digital information in support of an investigation or hypothesis.
5. Digital Forensics – Demonstrate knowledge of concepts and methodologies of incidence response, cyber forensics (acquisition, preservation, analysis, and presentation of evidence) and the information security lifecycle including cyber laws, cybercrimes, incidence response, pre-incident preparation, detection, notification, initial response, strategic decisions, response, recovery, and reporting.

DECLARATION OF CERTIFICATE

Any person admitted to Ferris State University may enroll in courses for undergraduate COB certificates and must declare the certificate with the **AFIS Department (231) 591-2434, BUS 212.**

STUDENT Signature

Date

CERTIFICATE ADVISOR Signature

Date

DEPARTMENT HEAD/CHAIR Signature

Date

ADMISSION REQUIREMENTS

- Applicant should show proof of high school graduation with a 3.00 GPA. If it is determined by the COB Dean's Office/SAA that regular program admission criteria should be met in order to complete the certificate successfully and be a contributing member of the course, all college transcripts should be submitted to the Admissions Office. Once admitted, an advisor will be assigned by the College of Business in the certificate program.
- Dual enrolled/concurrent students must complete their high school degree (provide transcript) before the certificate will be granted from FSU.
- Students wishing to pursue a bachelor or associate degree must meet the admission criteria for the program. This criteria review is initiated when the "Program Change Form" request is processed through the COB Dean's Office/SAA.
- Admission requirements for the certificate are identical to the admission requirements for the Information Security and Intelligence program at Ferris State University.

ADDITIONAL GRADUATION REQUIREMENTS

1. No more than 50% of the credits in a certificate may be transferred from another institution.
2. If a student is in a FSU degree-seeking program, the certificate will not be granted if more than 50% of the certificate credits are required in the program/major.
3. A 2.0 cumulative GPA is required for completion of the certificate with no individual course grade lower than 2.0.
4. A term prior to completion of the Certificate, the student will log into MyFSU, and complete the "Apply for Graduation". You will receive an email back with the next steps to take. Once this is done, the Graduation Secretary will notify the Registrar who will note the completion of the Certificate.

NOTICE: Students who return to the university after an interrupted enrollment (not including summer semester) must normally meet the requirements of the curriculum, which are in effect at the time of their return, not the requirements which were in effect when they were originally admitted.

Student Name	Student ID

ALL CERTIFICATE REQUIREMENTS 12 CREDITS REQUIRED

(Prerequisites are shown in parentheses)

CERTIFICATE COURSES – 12 CREDITS REQUIRED

Prefix	Code	Course Title	Credits	Grade
ISIN	200	Secure Digital Technologies (ISIN 121 with C- or higher)	3	
ISIN	209	Network Security (ISIN 200 with C- or higher)	3	
ISIN	308	Principles of Information Security (ISIN 200 or Instructor Permission)	3	
DFOR	310	Digital Forensics and Analysis (ISIN 121 or 308 with C or higher)	3	
ISIN	409	Network Forensics and Analysis (ISIN 200 and 308 with C- or higher)	3	

NOTES

- Students who return to the university after an interrupted enrollment (not including summer semester) must normally meet the requirements of the curriculum which are in effect at the time of their return, not the requirements which were in effect when they were originally admitted.

ADMISSION REQUIREMENTS

- Applicant should show proof of high school graduation with a 3.0 GPA (on a 4.0 scale). If it is determined by the College of Business Dean's Office/SAA that regular program admission criteria should be met in order to complete the certificate successfully and be a contributing member of the course, all college transcripts should be submitted to the Admissions Office. Once admitted, an advisor will be assigned by the College of Business in the certificate program.
- Dual enrolled/concurrent students must complete their high school degree (provide transcript) before the certificate will be granted from FSU.
- Students wishing to pursue a bachelor or associate degree must meet the admission criteria for the program. This criteria review is initiated when the "Program Change Form" request is processed through the College of Business Dean's Office/SAA.
- Admission requirements for the certificate are identical to the admission requirements for the Information Security and Intelligence program at Ferris State University.

DEGREE OUTCOMES

- Theory and Practice - Work as a member of an information security and/or intelligence team and effectively integrate theories and practice in an ISI environment.
- Security Domain - Demonstrate knowledge of concepts and methodologies of the principles of information security objectives and the information security lifecycle.
- Networks and Devices - Set up computer networks and peripheral devices, install and maintain software; demonstrate how to handle, transport, utilize and safeguard digital devices and information.
- Digital Devices - Theorize ways digital devices could be used for security and criminal activity and collect and process digital information in support of an investigation or hypothesis.
- Digital Forensics - Demonstrate knowledge of concepts and methodologies of incidence response, cyber forensics (acquisition, preservation, analysis, and presentation of evidence) and the information security lifecycle including cyber laws, cybercrimes, incidence response, pre-incident preparation, detection, notification, initial response, strategic decisions, response, recovery, and reporting.

GRADUATION REQUIREMENTS

In addition to meeting all the programmatic requirements, students must:

1. Maintain a 2.00 or higher cumulative GPA with no individual course grade lower than 2.0.
2. Earn 50% of the certificate credits from FSU (Residency).
3. Earn no more than 50% of the certificate credits from courses that are required in their program/major; if they are in an FSU degree-seeking program.
4. A term prior to completion of the certificate, log into MyFSU and complete the "Apply for Graduation". You will receive an email back with the next steps to take. Once this is done, the Graduation Secretary will notify the Registrar who will note the completion of the certificate.

CONTACT INFORMATION

COLLEGE: College of Business
DEPARTMENT/SCHOOL: AFIS/College of Business

PHONE: 231-591-2434
EMAIL: afis@ferris.edu

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DECLARATION OF CERTIFICATE

Role	Signature	Date
Student		
Certificate Advisor		
Department Head/Chair		

Student Name: _____

Student ID: _____

Prerequisites shown in parenthesis

REQUIRED COURSES – 12 Credits Required			Crs.	Gr.
ISIN	306	Security Informatics (Sophomore Status or Instructor Permission)	3	
ISIN	308	Principles of Information Security (ISIN 200 or Instructor Permission)	3	
ISIN	312	Applications of Information Security ((ISIN 305 or ISIN 306) and ISIN 308)	3	
CHOOSE ONE	ISIN 200	Secure Digital Technologies (None)	3	
	DFOR 310	Digital Forensics and Analysis (ISIN 121 or ISIN 308 w/C or higher)		
	ISIN 335	Pen Testing and Cloud Security (ISIN 312)		
	ISIN 409	Network Forensics and Analysis (ISIN 200 and ISIN 308 w/C- or higher)		
	ISIN 430	Pen Testing and Mobile Security (ISIN 312 and ISIN 325)		

CERTIFICATE OUTCOMES

1. Theory and Practice – Work as a member of an information security and/or intelligence team and effectively integrate theories and practice in an ISI environment.
2. Security Domain – Demonstrate knowledge of concepts and methodologies of the principles of information security objectives and the information security lifecycle.
3. Security Assessment – Assess the security posture of computer networks and computer software; demonstrate how to identify security vulnerabilities, remediate vulnerabilities, and document the vulnerabilities.
4. Digital Devices – Theorize ways digital devices could be used for security and criminal activity and collect and process digital information in support of an investigation or hypothesis.
5. Event Analysis Recognize the potential for multiple explanations for events and information and be able to analyze and describe the accuracy of the information.

DECLARATION OF CERTIFICATE

Any person admitted to Ferris State University may enroll in courses for undergraduate COB certificates and must declare the certificate with the **AFIS Department (231) 591-2434, BUS 212.**

STUDENT Signature

Date

CERTIFICATE ADVISOR Signature

Date

DEPARTMENT HEAD/CHAIR Signature

Date

ADMISSION REQUIREMENTS

- Applicant should show proof of high school graduation with a 3.0 GPA. If it is determined by the COB Dean's Office/SAA that regular program admission criteria should be met in order to complete the certificate successfully and be a contributing member of the course, all college transcripts should be submitted to the Admissions Office. Once admitted, an advisor will be assigned by the College of Business in the certificate program.
- Dual enrolled/concurrent students must complete their high school degree (provide transcript) before the certificate will be granted from FSU.
- Students wishing to pursue a bachelor or associate degree must meet the admission criteria for the program. This criteria review is initiated when the "Program Change Form" request is processed through the COB Dean's Office/SAA.
- Admission requirements for the certificate are identical to the admission requirements for the Information Security and Intelligence program at Ferris State University.

ADDITIONAL GRADUATION REQUIREMENTS

1. No more than 50% of the credits in a certificate may be transferred from another institution.
2. If a student is in a FSU degree-seeking program, the certificate will not be granted if more than 50% of the certificate credits are required in the program/major.
3. A 2.0 cumulative GPA is required for completion of the certificate with no individual course grade lower than 2.0.
4. A term prior to completion of the Certificate, the student will log into MyFSU, and complete the "Apply for Graduation". You will receive an email back with the next steps to take. Once this is done, the Graduation Secretary will notify the Registrar who will note the completion of the Certificate.

NOTICE: Students who return to the university after an interrupted enrollment (not including summer semester) must normally meet the requirements of the curriculum, which are in effect at the time of their return, not the requirements which were in effect when they were originally admitted.

CYBERSECURITY - ETHICAL HACKING (CYEH) – 12 CREDITS

2019-2020

Certificate

PROPOSED CHECKSHEET

College of Business

Student Name	Student ID

ALL CERTIFICATE REQUIREMENTS 12 CREDITS REQUIRED

(Prerequisites are shown in parentheses)

CERTIFICATE COURSES – 12 CREDITS REQUIRED

Prefix	Code	Course Title	Credits	Grade
ISIN	306	Security Informatics (Sophomore Status or Instructor Permission)	3	
ISIN	308	Principles of Information Security (ISIN 200 or Instructor Permission)	3	
ISIN	312	Applications of Information Security ((ISIN 305 or 306) and ISIN 308)	3	
CHOOSE 1 OF 5	ISIN 200	Secure Digital Technologies (ISIN 121 with C- or higher)	3	
	ISIN 209	Network Security (ISIN 200 with C- or higher)	3	
	DFOR 310	Digital Forensics and Analysis (ISIN 121 or 308 with C or higher)	3	
	ISIN 335	Pen Testing and Cloud Security (ISIN 312)	3	
	ISIN 409	Network Forensics and Analysis (ISIN 200 and 308 with C- or higher)	3	
	ISIN 430	Pen Testing and Mobile Security (ISIN 312 and 325)	3	

NOTES

- Students who return to the university after an interrupted enrollment (not including summer semester) must normally meet the requirements of the curriculum which are in effect at the time of their return, not the requirements which were in effect when they were originally admitted.

ADMISSION REQUIREMENTS

- Applicant should show proof of high school graduation with a 3.0 GPA (on a 4.0 scale). If it is determined by the College of Business Dean's Office/SAA that regular program admission criteria should be met in order to complete the certificate successfully and be a contributing member of the course, all college transcripts should be submitted to the Admissions Office. Once admitted, an advisor will be assigned by the College of Business in the certificate program.
- Dual enrolled/concurrent students must complete their high school degree (provide transcript) before the certificate will be granted from FSU.
- Students wishing to pursue a bachelor or associate degree must meet the admission criteria for the program. This criteria review is initiated when the "Program Change Form" request is processed through the College of Business Dean's Office/SAA.
- Admission requirements for the certificate are identical to the admission requirements for the Information Security and Intelligence program at Ferris State University.

1. Theory and Practice - Work as a member of an information security and/or intelligence team and effectively integrate theories and practice in an ISI environment.
2. Security Domain - Demonstrate knowledge of concepts and methodologies of the principles of information security objectives and the information security lifecycle.
3. Security Assessment - Assess the security posture of computer networks and computer software; demonstrate how to identify security vulnerabilities, remediate vulnerabilities, and document the vulnerabilities.
4. Digital Devices - Theorize ways digital devices could be used for security and criminal activity and collect and process digital information in support of an investigation or hypothesis.
5. Event Analysis - Recognize the potential for multiple explanations for events and information and be able to analyze and describe the accuracy of the information.

GRADUATION REQUIREMENTS

In addition to meeting all the programmatic requirements, students must:

1. Maintain a 2.00 or higher cumulative GPA with no individual grade lower than a 2.0.
2. Earn 50% of the certificate credits from FSU (Residency).
3. Earn no more than 50% of the certificate credits from courses that are required in their program/major; if they are in an FSU degree-seeking program.
4. A term prior to completion of the certificate, log into MyFSU and complete the "Apply for Graduation". You will receive an email back with the next steps to take. Once this is done, the Graduation Secretary will notify the Registrar who will note the completion of the certificate.

CONTACT INFORMATION

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DECLARATION OF CERTIFICATE

Role	Signature	Date
Student		
Certificate Advisor		
Department Head/Chair		

Student Name: _____

Student ID: _____

University General Education Requirements	Crs.	Gr.
---	------	-----

Tier 1 Foundation Competencies		<i>Prerequisites shown in parenthesis</i>
COMMUNICATION COMPETENCY – Minimum 6 Credits Required		
ENGL	150	English 1 (ENGL 074 or ACT English 14 or SAT ERW 450 or pre2016 SAT Writing 370 or TOEFL Internet Total Score 61 or MSUFLT Composite 73 or IELTS Overall 5.5)
ENGL	250	English 2 (ENGL 150 w/C- or higher)
QUANTITATIVE LITERACY COMPETENCY – Minimum 3 Credits		
CHOOSE ONE	MATH 114	Quantitative Reasoning for Professionals 2 (((MATH 109 or 110) w/C- or higher or Math ACT 19 or SAT (post-2016) 500 or SAT (pre-2016) 460) and (ENGL 074 or English ACT 14 or SAT (post-2016) 370 or SAT (pre 2-16) 450)); if Math ACT 24 or SAT 580 or higher, student must substitute General Education Elective credits.
	MATH 115	Intermediate Algebra ((MATH 109 or 110) w/C- or higher or Math ACT 19 or SAT (post-2016) 500 or SAT (pre-2016) 460); if Math ACT 24 or SAT 580 or higher, student must substitute General Education Elective credits.

Tier 2 Distribution Competencies		
NATURAL SCIENCES COMPETENCY – Minimum 3 Credits		
		3-4
CULTURE COMPETENCY – Minimum 6 Credits		
		3
		3
SELF AND SOCIETY COMPETENCY – Minimum 3 Credits		
		3

ADDITIONAL GENERAL EDUCATION REQUIREMENT		
CHOOSE ONE	COMM 105	Interpersonal Communication (None)
	COMM 121	Fundamentals of Public Speaking (None)
		3

Total Credits: 60-62: General Education Credits 24 to 26, ISI Major Credits 27, ISI Option Credits 9, Total Credits 60-62

Major Requirements– Minimum 36 Credits	Crs.	Gr.
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MAJOR COURSES – Minimum 27 Credits		
ISIN	200	Secure Digital Technologies (None)
STQM	260	Introduction to Statistics (MATH 114, 115, 116, 120, 126, 130, 132, or 135, w/C- or higher or Math ACT 24 or SAT (post-2016) 580 or SAT (pre-2016) 560).
STQM	270	Introduction to Data Mining (STQM 260 or COHP 350 or MATH 251 or MFGE 341 or PSYC 210 or SOCY 371 w/ C- or higher)
ISIN	300	Link and Visual Analysis (None)
ISIN	306	Security Informatics (Sophomore Status or Instructor Permission)
ISIN	308	Principles of Information Security (ISIN 200 or Instructor Permission)
DFOR	310	Digital Forensics and Analysis (ISIN 121 or ISIN 308 w/C or higher)
ISIN	312	Applications of Information Security ((ISIN 305 or ISIN 306) and ISIN 30)
ISIN	325	Database Security (Sophomore Status)

INFORMATION SECURITY AND INTELLIGENCE - 60 Credits

Associates (AAS)

CURRENT CHECKSHEET

College of Business

Elective Options – Minimum 9 Credits – Advisor Approval required				
CHOOSE THREE	ISIN 301	Data Intelligence Competitive Theory (ISIN 300)	3	
	DFOR 315	Advanced Digital Forensics (DFOR 310 w/C or higher)	3	
	ISIN 317	Fraud Examination (None)	3	
	PROJ 320	Project Management Fundamentals (Sophomore Status)	3	
	STQM 322	Inferential Statistics (STQM 260 w/C- or higher)	3	
	ISIN 335	Pen Testing and Cloud Security (ISIN 312)	3	
	STQM 342	Data Mining Tools (STQM 270 w/C- or higher)	3	
	STQM 360	Risk Analysis and Strategy (STQM 260 w/C- or higher)	3	
	ISIN 380	Current Issues in Information Security and Intelligence (ISIN 308)	3	
	STQM 380	Data Mining Processes (STQM 342 w/C- or higher)	3	
	ISIN 429	Legal and Ethical Issues in Information Security (Sophomore Status)	3	
	ISIN 430	Pen Testing and Mobile Security (ISIN 312 and ISIN 325)	3	
		Directed Elective	3	

Semester-By-Semester Layout of Classes

FIRST YEAR

Fall Semester

Class	Credits
COMM 105 or COMM 121	3
MATH 114 or MATH 115	3-4
Natural Sciences Competency	3-4
ENGL 150	3
Culture Competency – Foreign Language recommended	3
Total Credits	15-17

Spring Semester

Class	Credits
ENGL 250	3
ISIN 200	3
Self and Society Competency	3
STQM 260	3
ISIN 300	3
Total Credits	15

Summer Semester

Class	Credits
Culture Competency	
Total Credits	

SECOND YEAR

Fall Semester

Class	Credits
ISIN 306	3
ISIN 308	3
ISIN 325	3
STQM 270	3
ISI Major Option Class	3
Total Credits	15

Spring Semester

Class	Credits
ISIN 312	3
DFOR 310	3
ISI Major Option Class	3
ISI Major Option Class	3
ISI Major Option Class	3
Total Credits	15

Summer Semester

Class	Credits
Total Credits	

NOTE: Although taking classes during summer semester in the program is optional, doing so may expedite the completion of your degree.

DEGREE OUTCOMES

1. Theory and Practice – Work as a member of an information security and/or intelligence team and effectively integrate theories and practice in an ISI environment.
2. Digital Devices – Theorize ways digital devices could be used for security and criminal activity and collect and process digital information in support of an investigation or hypothesis.
3. Security Risk Analysis – Develop skills for evaluating organizational structure, environment, and planning strategies for security risk and analyze the effectiveness of a security plan against the methods used by organized crime, gangs and terrorist organizations.
4. Data Bases – Design, construct and maintain databases in a format consistent with data mining. Analyze these structures in a temporal manner and present findings using a variety of methods including visual analysis tools and techniques.
5. Event Analysis – Recognize the potential for multiples explanations for events and information an be able to analyze and describe the accuracy of the information.
6. Forensic Tools Utilize digital forensic tools and encryption technology to reconstruct information and recover lost or deleted files in a variety of digital platforms and settings using appropriate methodologies
7. Networks and devices – Set up computer networks and peripheral devices, install and maintain software; demonstrate how to handle, transport, utilize and safeguard digital devices and information.
8. ISI Lifecycle – Demonstrate knowledge of concepts and methodologies in information security and the Information Security Lifecycle (Protection) including information security administration, Security+ and CISSP.
9. Digital Forensics – Demonstrate knowledge of concepts and methodologies of incidence response, cyber forensics (acquisition, preservation, analysis, and presentation of evidence) and the information security lifecycle including cyber laws, cybercrimes, incidence response, pre-incident preparation, detection, notification, initial response, strategic decisions, response, recovery, and reporting.
10. Data Mining – Demonstrate knowledge of business intelligence and the evaluation of analytical data used in tragic decision making including knowledge discovery, tracking, managing and understanding organized data.

ADMISSION REQUIREMENTS

New Students

- Minimum 3.0 High School GPA
- Minimum ACT composite score of 22 and ACT MATH score of 22 or SAT minimum math score of 550.

Transfer Students

- Combined college or university GPA of 3.0 (on a 4.0 scale) from all institutions attended. GPA based on completion of 24 credit hours or more.
- Students must have completed the transfer equivalency of FSU's MATH 115 with a grade of C or higher or have either a minimum ACT MATH score of 22 or minimum SAT MATH score of 550.
- Additional requirements: All students applying for admission to the ISI program will have to submit a 750 to 1,000 word essay that addresses the following: who they are and why they desire admission to the ISI program, description of a personal quality, talent, accomplishment, contribution or experience, and a description of someone that influenced them and why.

GRADUATION REQUIREMENTS

1. Maintain a 2.00 cumulative GPA in all FSU courses
2. Have 15 credits FSU Residency/15 credit hours must be Ferris classes.
3. Have a minimum 60 total credits to earn an associate degree

NOTICE: Students who return to the university after an interrupted enrollment (not including summer semester) must normally meet the requirements of the curriculum, which are in effect at the time of their return, not the requirements which were in effect when they were originally admitted.

INFORMATION SECURITY AND INTELLIGENCE (ISIN) – 60 CREDITS
2019-2020

Associate of Applied Science (AAS)

PROPOSED CHECKSHEET

College of Business

Student Name	Student ID

UNIVERSITY REQUIREMENTS
FIRST YEAR SEMINAR REQUIREMENT (FSUS 100 OR EQUIVALENT)

All First-Time-In-Any-College Freshman (FTIAC's) must complete a one-credit FSUS 100 course, or its equivalent. Additional information and the definition of FTIAC for FSUS purposes can be found in the: [Ferris State University Academic Affairs FSUS Policy](#)

Prefix	Code	Course Title	Credits	Grade

UNIVERSITY GENERAL EDUCATION REQUIREMENTS

(Prerequisites are shown in parentheses)

Courses in this section are required to satisfy the University General Education Requirements for an associate's degree. The University General Education requirements can be found on the: [Ferris State University General Education Requirements Webpage](#)

COMMUNICATION COMPETENCY – 6 CREDITS REQUIRED (OR THEIR EQUIVALENT)

Prefix	Code	Course Title	Credits	Grade
ENGL	150	English 1 (ENGL 074 or English ACT 14 or (Pre-2016) Reading SAT 370 or (Post-2016) ERW SAT 450 or TOEFL Internet Total Score 61 or MSU-ELT Composite 73 or IELTS Overall 5.5)	3	
ENGL	250	English 2 (ENGL 150 with C- or higher)	3	

QUANTITATIVE LITERACY COMPETENCY – 3 CREDITS REQUIRED (OR THEIR EQUIVALENT)

Prefix	Code	Course Title	Credits	Grade
CHOOSE 1 OF 2	MATH 114	Quantitative Reasoning for Professionals 2 ((MATH 109 or 110 with C- or higher or Math ACT 19 or (Pre-2016) Math SAT 460 or (Post-2016) Math SAT 500) and (ENGL 074 or English ACT 14 or (Pre-2016) Reading SAT 370 or (Post-2016) ERW SAT 450); if Math ACT 24 or SAT 580 or higher, student must substitute General Education Elective credits)	4	
	MATH 115	Intermediate Algebra (MATH 109 or 110 with C- or higher or Math ACT 19 or (Pre-2016) Math SAT 460 or (Post-2016) Math SAT 500; if Math ACT 24 or SAT 580 or higher, student must substitute General Education Elective credits)	3	

NATURAL SCIENCES COMPETENCY – 3 CREDITS REQUIRED

One course is required with a minimum of 3 credits: must be a lab course.

Prefix	Code	Course Title	Credits	Grade

CULTURE COMPETENCY – 6 CREDITS REQUIRED

A foreign language course is recommended.

Prefix	Code	Course Title	Credits	Grade

SELF AND SOCIETY COMPETENCY – 3 CREDITS REQUIRED

Prefix	Code	Course Title	Credits	Grade

INFORMATION SECURITY AND INTELLIGENCE (ISIN) – 60 CREDITS

Associate of Applied Science (AAS)

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ADDITIONAL GENERAL EDUCATION REQUIREMENTS – 3 CREDITS REQUIRED

These courses are additional General Education courses to meet the requirements for this specific program.

CHOOSE 1 OF 2	COMM 105	Interpersonal Communication (None)	3	
	COMM 121	Fundamentals of Public Speaking (None)	3	

ISIN	121	Digital Security Awareness (None)	3	
ISIN	200	Secure Digital Technologies (ISIN 121 with C- or higher)	3	
STQM	260	Introduction to Statistics (MATH 114, 115, 116, 120, 126, 130, 132, or 135 with a C- or higher or Math ACT 24 or (Pre-2016) Math SAT 560 or (Post-2016) Math SAT 580)	3	
STQM	270	Introduction to Data Mining (COHP 350, MATH 251, MFGE 341, PSYC 210, SOCY 371, or STQM 260 with C- or higher)	3	
ISIN	300	Link and Visual Analysis (None)	3	
ISIN	306	Security Informatics (Sophomore Status or Instructor Permission)	3	
ISIN	308	Principles of Information Security (ISIN 200 or Instructor Permission)	3	
DFOR	310	Digital Forensics and Analysis (ISIN 121 or 308 with C or higher)	3	
ISIN	312	Applications of Information Security ((ISIN 305 or 306) and 308)	3	
ISIN	325	Database Security (Sophomore Status)	3	

CHOOSE 3 OF 16	ISIN 209	Network Security (ISIN 200 with C- or higher)	3	
	STQM 270	Introduction to Data Mining (COHP 350, MATH 251, MFGE 341, PSYC 210, SOCY 371, or STQM 260 with C- or higher)	3	
	ISIN 301	Data Intelligence Competitive Theory (ISIN 300)	3	
	DFOR 315	Advanced Digital Forensics (DFOR 310 with C or higher)	3	
	ISIN 317	Fraud Examination (None)	3	
	PROJ 320	Project Management Fundamentals (Sophomore Status)	3	
	STQM 322	Inferential Statistics (STQM 260 with C- or higher)	3	
	ISIN 335	Pen Testing and Cloud Security (ISIN 312)	3	
	STQM 342	Data Mining Tools (STQM 270 with C or higher)	3	
	STQM 360	Risk Analysis and Strategy (STQM 260 with C- or higher)	3	
	ISIN 380	Current Issues in Information Security and Intelligence (ISIN 308)	3	
	STQM 380	Data Mining Processes (STQM 342 with C- or higher)	3	
	ISIN 429	Legal and Ethical Issues in Information Security (Sophomore Status)	3	
	ISIN 430	Pen Testing and Mobile Security (ISIN 312 and 325)	3	
	DFOR 454	CyberSec Incident Response (DFOR 315)	3	
		Directed Elective	3	

NOTES

- Students who return to the university after an interrupted enrollment (not including summer semester) must normally meet the requirements of the curriculum which are in effect at the time of their return, not the requirements which were in effect when they were originally admitted.

**ADMISSION REQUIREMENTS****New Students**

- Minimum 3.0 High School GPA (on a 4.0 scale)
- Minimum ACT Composite score of 22 and ACT Math score of 22 or SAT minimum Math score of 550.

Transfer Students

- Combined college of university GPA of 3.0 (on a 4.0 scale) from all institutions attended. GPA based on completion of 24 credit hours or more.
- Students must have completed the transfer equivalency of FSU's MATH 115 with a grade of C or higher or have either a minimum ACT Math score of 22 or minimum SAT Math score of 550.
- Additional requirements: All students applying for admission to the ISI program will have to submit a 750 to 1,000 word essay that addresses the following: who they are and why they desire admission to the ISI program, description of a personal quality, talent, accomplishment, contribution or experience, and a description of someone that influenced them and why.

DEGREE OUTCOMES

1. Theory and Practice - Work as a member of an information security and/or intelligence team and effectively integrate theories and practice in an ISI environment.
2. Digital Devices - Theorize ways digital devices could be used for security and criminal activity and collect and process digital information in support of an investigation or hypothesis.
3. Security Risk Analysis - Develop skills for evaluating organizational structure, environment, and planning strategies for security risk and analyze the effectiveness of a security plan against the methods used by organized crime, gangs and terrorist organizations.
4. Databases - Design, construct and maintain databases in a format consistent with data mining. Analyze these structures in a temporal manner and present findings using a variety of methods including visual analysis tools and techniques.
5. Event Analysis - Recognize the potential for multiples explanations for events and information and be able to analyze and describe the accuracy of the information.
6. Forensic Tools - Utilize digital forensic tools and encryption technology to reconstruct information and recover lost or deleted files in a variety of digital platforms and settings using appropriate methodologies
7. Networks and Devices - Set up computer networks and peripheral devices, install and maintain software; demonstrate how to handle, transport, utilize and safeguard digital devices and information.
8. ISI Lifecycle - Demonstrate knowledge of concepts and methodologies in information security and the Information Security Lifecycle (Protection) including information security administration, Security+ and CISSP.
9. Digital Forensics - Demonstrate knowledge of concepts and methodologies of incidence response, cyber forensics (acquisition, preservation, analysis, and presentation of evidence) and the information security lifecycle including cyber laws, cybercrimes, incidence response, pre-incident preparation, detection, notification, initial response, strategic decisions, response, recovery, and reporting.
10. Data Mining - Demonstrate knowledge of business intelligence and the evaluation of analytical data used in tragic decision making including knowledge discovery, tracking, managing and understanding organized data.

GRADUATION REQUIREMENTS

In addition to meeting all the programmatic requirements, students must:

1. Meet University General Education requirements.
2. Earn 15 credits from FSU (Residency).
3. Maintain a 2.00 or higher cumulative FSU GPA.
4. Earn a minimum of 60 credits.

CONTACT INFORMATION

COLLEGE: College of Business
DEPARTMENT/SCHOOL: AFIS/College of Business

PHONE: 231-591-2434
EMAIL: afis@ferris.edu

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SEMESTER LAYOUT OF COURSES

FIRST YEAR

Fall Courses		Credits	Spring Courses		Credits	Summer Courses		Credits
COMM 105 or 121		3	ENGL 250		3	Culture Competency		3
MATH 114 or 115		3-4	ISIN 200		3			
Natural Sciences Competency		3-4	Self and Society Competency		3			
ENGL 150		3	STQM 260		3			
ISIN 121		3	ISIN 300		3			
Total Credits		15-17	Total Credits		15	Total Credits		3

SECOND YEAR

Fall Courses		Credits	Spring Courses		Credits	Summer Courses		Credits
ISIN 306		3	ISIN 312		3			
ISIN 308		3	DFOR 310		3			
ISIN 325		3	Elective Course (Advisor Approval)		3			
STQM 270 Culture Competency		3	Elective Course (Advisor Approval)		3			
Elective Course (Advisor Approval)		3						
Total Credits		15	Total Credits		12	Total Credits		



Student Name: _____

Student ID: _____

University General Education Requirements Crs Gr

Tier 1 Foundation Competencies *Prerequisites shown in parenthesis*

COMMUNICATION COMPETENCY – Minimum 12 Credits

CHOOSE ONE	COMM 105	Interpersonal Communication	3	
	COMM 121	Fundamentals of Public Speaking		
ENGL	150	English 1 (ENGL 074 or ACT English 14 or SAT ERW 450 or pre2016 SAT Writing 370 or TOEFL Internet Total Score 61 or MSUFLT Composite 73 or IELTS Overall 5.5)	3	
ENGL	250	English 2 (ENGL 150 w/C- or higher)	3	
CHOOSE ONE	ENGL 311	Advanced Technical Writing (ENGL 250 or ENGL 211 w/ C or higher)	3	
	ENGL 321	Advanced Composition (ENGL 250 or ENGL 211 w/C or higher)		
	ENGL 325	Advanced Business Writing (ENGL 250 or ENGL 211 w/C or higher)		

QUANTITATIVE LITERACY COMPETENCY – Minimum 3 Credits

CHOOSE ONE	MATH 114	Quantitative Reasoning for Professionals 2 (((MATH 109 or 110) w/C- or higher or Math ACT 19 or SAT (after 2016) 500 or SAT (pre 2016) 460) and (ENGL 074 or English ACT 14 or SAT (post 2016 370) or SAT (pre 2-16) 450)); if MATH ACT 24 or SAT 580 or higher, student must substitute General Education Elective credits.	4	
	MATH 115	Intermediate Algebra ((MATH 109 or 110) w/C- or higher or Math ACT 19 or SAT post-2016) 500 or SAT (pre-2016) 460); if MATH ACT 24 or SAT 580 or higher, student must substitute General Education Elective credits.	3	

Tier 2 Distribution Competencies

NATURAL SCIENCES COMPETENCY – Minimum 6 Credits with one lab course

			4	
			3	

**CULTURE COMPETENCY – Minimum 9 Credits from two different disciplines with one 200 level or higher
No more than 5 Credits in Cultural Competency Activities**

		(Foreign Language recommended)	3	
			3	
			3	

SELF AND SOCIETY COMPETENCY – Minimum 9 Credits from two different disciplines with one 200 level or higher

			3	
			3	
			3	

**DIVERSITY – Competency met by 2 courses designated as Global and U.S. Diversity is satisfied by:
These courses can be met through the Culture and Self and Society Competency requirements.**

Tier 3 Application Competencies

COLLABORATION COMPETENCY – Competency met by 2 courses contained in the Major or Business Core

ISIN 300 and MGMT 350

PROBLEM SOLVING COMPETENCY – Competency met by 2 courses contained in the Major or Business Core

ISIN 300 and MGMT 350

MACRO Stamp with MATH at 115 and ENGL 311 or ENGL 321 or ENGL 325 satisfies General Education

Total Credits 123: General Education Credits - 40, Business Courses Credits - 15, ISI Major Core Credits – 51, Directed Elective Credits – 5, Concentration Credits – 12

Freshman Seminar Requirement, FSUS 100, is satisfied by: _____

INFORMATION SECURITY AND INTELLIGENCE – 123 Credits

Bachelor of Science (BS)

CURRENT CHECKSHEET

College of Business

Major Requirements – 51 Credits Required (these courses ARE used to calculate the major 2.0 GPA requirement)			Crs.	Gr
Business Course Requirements – 15 credits required				
ACCT	201	Principles of Financial Accounting (MATH 109 or 110 w/C- or higher or MATH 114, 115, 116, 117, 118, 119, 120, 126, 130, 132, or 135 or Math ACT 19 or SAT 500)	3	
STQM	260	Introduction to Statistics (MATH 114, 115, 116, 120, 126, 130, 132, or 135, w/C- or higher or Math ACT 24 or SAT (post-2016) 580 or SAT (pre-2016) 560)	3	
MGMT	301	Applied Management (None)	3	
MKTG	321	Principles of Marketing (ENGL 150 w/ C- or higher and Sophomore Status)	3	
MGMT	350	Management Metrics and Decision Making (None)	3	
Major Course Requirements – 51 credits required				
ISIN	200	Secure Digital Technologies (None)	3	
STQM	270	Introduction to Data Mining (STQM 260 or COHP 350 or MATH 251 or MFGE 341 or PSYC 210 or SOCY 371 w/ C- or higher)	3	
ISIN	300	Link and Visual Analysis (None)	3	
ISIN	301	Data Intelligence Competitive Theory (ISIN 300)	3	
ISIN	306	Security Informatics (Sophomore Status or Instructor Permission)	3	
ISIN	308	Principles of Information Security (ISIN 200 or Instructor Permission)	3	
DFOR	310	Digital Forensics and Analysis (ISIN 121 or ISIN 308 w/C or higher)	3	
ISIN	312	Applications of Information Security ((ISIN 305 or ISIN 306) and ISIN 308)	3	
ISIN	317	Fraud Examination (None)	3	
PROJ	320	Project Management Fundamentals (Sophomore Status)	3	
ISIN	325	Database Security (Sophomore Status)	3	
STQM	360	Risk Analysis and Strategy (STQM 260 w/C- or higher)	3	
ISIN	380	Current Issues in Information Security and Intelligence (ISIN 308)	3	
ISIN	409	Network Forensics and Analysis (ISIN 200 and ISIN 308 w/C- or higher)	3	
ISIN	429	Legal and Ethical Issues in Information Security (Sophomore Status)	3	
ISIN	491	ISI Internship (Junior or Senior Status)	3	
ISIN	499	Capstone Experience (Instructor Approval and Senior Status)	3	
Directed Electives – 5 credits required				
			3	
			2	
Select One Concentration from List Below, or a Custom Concentration May Be Developed with Advisor Approval (all classes and concentrations may not be available at all campuses)				
DIGITAL FORENSICS CONCENTRATION (DGFN) – (12 credits required)				
CITS	270	Network+ (CITS 160 or ISIN 200 w/C or higher)	3	
DFOR	315	Advanced Digital Forensics (DFOR 310 w/C or higher)	3	
ISIN	335	Pen Testing and Cloud Security (ISIN 312)	3	
		Directed Elective	3	
PENETRATION TESTING AND SECURE SOFTWARE CONCENTRATION (PTSS) – (12 credits required)				
DFOR	315	Advanced Digital Forensics (DFOR 310)	3	
ISIN	335	Pen Testing and Cloud Security (ISIN 312)	3	
ISIN	430	Pen Testing and Mobile Security (ISIN 312 and ISIN 325)	3	
		Directed Elective	3	

INFORMATION SECURITY AND INTELLIGENCE – 123 Credits

Bachelor of Science (BS)

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College of Business

DATA MINING CONCENTRATION (DTMN) – This concentration is available at the main Big Rapids Campus Only – 12 credits required				
STQM	322	Inferential Statistics (STQM 260 w/C- or higher)	3	
STQM	342	Data Mining Tools (STQM 270 w/C- or higher)	3	
ISIN	335	Pen Testing and Cloud Security (ISIN 312)	3	
STQM	380	Data Mining Processes (STQM 342 w/C- or higher)	3	
NETWORK SECURITY CONCENTRATION (NWSC) – 12 credits required				
CITS	270	Network + (CITS 160 or ISIN 200 w/C or higher)	3	
CITS	280	Linux Administration (ISYS 105 or ISYS 105 competency or CITS 160 or ISIN 200 w/C or higher)	3	
		Directed Elective	3	
		Directed Elective	3	
CUSTOM CONCENTRATION (CUST) or APPROVED MINOR – Advisor Approval Required – 12 Credits required				
			3	
			3	
			3	
			3	
FOREIGN LANGUAGE CONCENTRATION (FRL) – 12 credits required				
		Foreign Language (transfer)	12	

ADDITIONAL GRADUATION REQUIREMENTS

Students must:

1. maintain a 2.00 cumulative GPA in all FSU courses
2. have 40 credits at the 300/400 level
3. have 30 credits of Ferris classes (FSU Residency requirement), 30 credit hours must be Ferris classes.
4. have a minimum 120 total credits to earn a bachelor degree
5. maintain a 2.00 cumulative GPA in the major, which includes the business courses, major, electives and concentration

NOTICE: Students who return to the university after an interrupted enrollment (not including summer semester) must normally meet the requirements of the curriculum, which are in effect at the time of their return, not the requirements which were in effect when they were originally admitted.

INFORMATION SECURITY AND INTELLIGENCE – 123 Credits

Bachelor of Science (BS)

CURRENT CHECKSHEET

College of Business

Semester-By-Semester Layout of Classes

FIRST YEAR

Fall Semester

Class	Credits
COMM 105 or COMM 121	3
MATH 114 or MATH 115	3-4
Culture Competency	3
Self and Society Competency	3
Total Credits	12-13

Spring Semester

Class	Credits
ENGL 150	3
Natural Science Competency	3 or 4
Culture Competency	3
Self and Society Competency	3
Total Credits	12-13

Summer Semester

Class	Credits
ENGL 250	3
Culture Competency (200 level)	3
Self and Society Competency (200 Level)	3
Natural Science Competency w/ Lab	4
Total Credits	13

NOTE: Although taking classes during summer semester of your first year in the program is optional, doing so will expedite the completion of your degree.

SECOND YEAR

Fall Semester

Class	Credits
ISIN 306	3
ISIN 308	3
ISIN 200	3
ISIN 325	3
Total Credits	12

Spring Semester

Class	Credits
MKTG 321	3
STQM 260	3
DFOR 310	3
Concentration Course or Directed Elective	3
Total Credits	12

Summer Semester

Class	Credits
ISIN 317	3
ISIN 300	3
MGMT 301	3
Total Credits	9

NOTE: Although taking classes during summer semester of your first year in the program is optional, doing so will expedite the completion of your degree.

THIRD YEAR

Fall Semester

Class	Credits
STQM 270	3
ENGL 311 or 321 or 325	3
MGMT 350	3
Concentration Course or Directed Elective	3
Total Credits	12

Spring Semester

Class	Credits
ISIN 301	3
PROJ 320	3
ISIN 380	3
Concentration Course or Directed Elective	3
Total Credits	12

Summer Semester

Class	Credits
ISIN 429	3
ISI Internship	3
Concentration Course or Directed Elective	3
Total Credits	9

FOURTH YEAR

Fall Semester

Class	Credits
ACCT 201	3
STQM 360	3
Concentration Course or Directed Elective	3
Concentration Course or Directed Elective	3
Total Credits	12

Spring Semester

Class	Credits
ISIN 499	3
ISIN 312	3
Concentration Course or Directed Elective	3
ISIN 409	3
Total Credits	12

Summer Semester

Class	Credits
Total Credits	

INFORMATION SECURITY AND INTELLIGENCE – 123 Credits

Bachelor of Science (BS)

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College of Business

DEGREE OUTCOMES

1. Theory and Practice - Work as a member of an information security and/or intelligence team and effectively integrate theories and practice in an ISI environment
2. Digital devices - Theorize ways digital devices could be used for security and criminal activity and collect and process digital information in support of an investigation or hypothesis
3. Security Risk Analysis - Develop skills for evaluating organizational structure, environment, and planning strategies for security risk and analyze the effectiveness of a security plan against the methods used by organized crime, gangs and terrorist organizations.
4. Data Bases - Design, construct and maintain databases in a format consistent with data mining. Analyze these structures in a temporal manner and present findings using a variety of methods including visual analysis tools and techniques.
5. Event Analysis - Recognize the potential for multiple explanations for events and information and be able to analyze and describe the accuracy of the information.
6. Forensic Tools - Utilize digital forensic tools and encryption technology to reconstruct information and recover lost or deleted files in a variety of digital platforms and settings using appropriate methodologies.
7. Networks and Devices - Set up computer networks and peripheral devices, install and maintain software; demonstrate how to handle, transport, utilize and safeguard digital devices and information.
8. ISI Lifecycle - Demonstrate knowledge of concepts and methodologies in information security and the Information Security Lifecycle (Protection) including information security administration, Security+ and CISSP.
9. Digital Forensics Concentration - Demonstrate knowledge of concepts and methodologies of incidence response, cyber forensics (acquisition, preservation, analysis, and presentation of evidence) and the information security lifecycle including cyber laws,
10. GIS and Data Mining Concentration – Demonstrate knowledge of business intelligence and GIS data and the evaluation of analytical data used in strategic decision making including knowledge discovery, tracking, managing and understanding organized data. Students will construct GIS and data mining environments using appropriate tools, techniques, decision support systems, and emerging trends.
11. Sustainability - To be able to obtain the faculty resources for continued growth both in numbers and in locations. Currently over 1/2 of the classes taught for both graduate and undergraduate programs is being serviced by adjuncts. Adding to this problem is the issue is the fact that there is no system in place to properly integrate the adjunct into the team and to ensure they are mentored and teaching the outcomes required.

ADMISSION REQUIREMENTS

New Students SAT Scores

- Minimum 3.0 high school GPA
- Minimum ACT composite score of 22 and ACT Math score of 22 or SAT minimum math score of 550.

Transfer Students

- Combined college or university GPA of 3.0 (on a 4.0 scale) from all institutions attended. GPA based on completion of 24 credit hours or more.
- Completion of the transfer equivalency for FSU's MATH 115 with a grade of "C" or higher or have either a minimum ACT Math score of 22 or minimum SAT Math score of 550.
- Additional requirements: All students applying for admission to the ISI program will have to submit a 750 to 1,000 word essay that addresses the following: Who they are and why they desire admission to the ISI program, description of a personal quality, talent, accomplishment, contribution, or experience, and a description of someone that influenced them and why.

INFORMATION SECURITY AND INTELLIGENCE (ISIN) – 120 CREDITS
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College of Business

Student Name	Student ID

UNIVERSITY REQUIREMENTS
FIRST YEAR SEMINAR REQUIREMENT (FSUS 100 OR EQUIVALENT)

All First-Time-In-Any-College Freshman (FTIAC's) must complete a one-credit FSUS 100 course, or its equivalent. Additional information and the definition of FTIAC for FSUS purposes can be found in the: [Ferris State University Academic Affairs FSUS Policy](#)

Prefix	Code	Course Title	Credits	Grade

UNIVERSITY GENERAL EDUCATION REQUIREMENTS

(Prerequisites are shown in parentheses)

Courses in this section are required to satisfy the University General Education Requirements for a bachelor's degree. The University General Education requirements can be found on the: [Ferris State University General Education Requirements Webpage](#)

COMMUNICATION COMPETENCY – 12 CREDITS REQUIRED (OR THEIR EQUIVALENT)

Prefix	Code	Course Title	Credits	Grade
CHOOSE 1 OF 2	COMM 105	Interpersonal Communication (None)	3	
	COMM 121	Fundamentals of Public Speaking (None)	3	
ENGL	150	English 1 (ENGL 074 or English ACT 14 or (Pre-2016) Reading SAT 370 or (Post-2016) ERW SAT 450 or TOEFL Internet Total Score 61 or MSU-ELT Composite 73 or IELTS Overall 5.5)	3	
ENGL	250	English 2 (ENGL 150 with C- or higher)	3	
CHOOSE 1 OF 3	ENGL 311	Advanced Technical Writing (ENGL 211 or 250 with C or higher)	3	
	ENGL 321	Advanced Composition (ENGL 211 or 250 with C or higher)	3	
	ENGL 325	Advanced Business Writing (ENGL 211 or 250 with C or higher)	3	

QUANTITATIVE LITERACY COMPETENCY – 3 CREDITS REQUIRED (OR THEIR EQUIVALENT)

Prefix	Code	Course Title	Credits	Grade
CHOOSE 1 OF 2	MATH 114	Quantitative Reasoning for Professionals 2 ((MATH 109 or 110 with C- or higher or Math ACT 19 or (Pre-2016) Math SAT 460 or (Post-2016) Math SAT 500) and (ENGL 074 or English ACT 14 or (Pre-2016) Reading SAT 370 or (Post-2016) ERW SAT 450); if Math ACT 24 or SAT 580 or higher, student must substitute General Education Elective credits)	4	
	MATH 115	Intermediate Algebra (MATH 109 or 110 with C- or higher or Math ACT 19 or (Pre-2016) Math SAT 460 or (Post-2016) Math SAT 500; if Math ACT 24 or SAT 580 or higher, student must substitute General Education Elective credits)	3	

NATURAL SCIENCES COMPETENCY – 6 CREDITS REQUIRED

Two courses are required with a minimum of 6 credits: must have at least one lab course.

Prefix	Code	Course Title	Credits	Grade

CULTURE COMPETENCY – 9 CREDITS REQUIRED

Three courses are required with a minimum of 9 credits: must be from two different disciplines, have at least one 200 level or higher course, and have no more than 5 credits from Cultural Competency Activities. *A foreign language course is recommended.*

Prefix	Code	Course Title	Credits	Grade
			[200+]	

SELF AND SOCIETY COMPETENCY – 9 CREDITS REQUIRED

Three courses are required with a minimum of 9 credits: must be from two different disciplines and have at least one 200 level or higher course.

Prefix	Code	Course Title	Credits	Grade
ECON	221	Principles of Macroeconomics (MATH 109 or 110 with C- or higher or (MATH 114, 115, 116, 117, 118, 119, 120, 122, or 126 or Math ACT 19 or (Pre-2016) Math SAT 460 or (Post-2016) Math SAT 500))	3	

DIVERSITY COMPETENCY – 2 COURSES REQUIRED

If not met by courses taken for Culture, Self and Society, or Michigan Transfer Agreement (MTA), a student must have one course with the Global Diversity attribute and one course with the U.S. Diversity attribute. Some courses include both Global Diversity and U.S. Diversity attributes. Courses with both attributes satisfies the entire Diversity competency.

Prefix	Code	Course Title	Credits	Grade
			[Global Diversity]	
			[U.S. Diversity]	

COLLABORATION COMPETENCY – 2 COURSES REQUIRED

If not met by courses taken in the bachelor degree program, a student must have two courses with the Collaboration attribute. Some courses include both Collaboration and Problem Solving attributes. Of the required courses in this specific program, these courses will meet the Collaboration requirement:

- ISIN 300 - Link and Visual Analysis
- ~~MGMT 350 - Management Metrics and Decision Making~~
- MKTG 321 - Principles of Marketing
- PROJ 320 - Project Management Fundamentals

PROBLEM SOLVING COMPETENCY – 2 COURSES REQUIRED

If not met by courses taken in the bachelor degree program, a student must have two courses with the Problem Solving attribute. Some courses include both Collaboration and Problem Solving attributes. Of the required courses in this specific program, these courses will meet the Problem Solving requirement:

- ACCT 201 - Principles of Financial Accounting
- ISIN 300 - Link and Visual Analysis
- ~~MGMT 350 - Management Metrics and Decision Making~~
- MKTG 321 - Principles of Marketing
- PROJ 320 - Project Management Fundamentals

INFORMATION SECURITY AND INTELLIGENCE (ISIN) – 120 CREDITS

Bachelor of Science (BS)

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2019-2020

College of Business

ALL MAJOR REQUIREMENTS – 83 CREDITS REQUIRED

(Prerequisites are shown in parentheses)

These courses are used to calculate the major 2.0 GPA requirement.

MAJOR COURSES – 51 CREDITS REQUIRED

Prefix	Code	Course Title	Credits	Grade
ISIN	121	Digital Security Awareness (None)	3	
ISIN	200	Secure Digital Technologies (ISIN 121 with C- or higher)	3	
ISIN	209	Network Security (ISIN 200 with C- or higher)	3	
STQM	270	Introduction to Data Mining (COHP 350, MATH 251, MFGE 341, PSYC 210, SOCY 371, or STQM 260 with C- or higher)	3	
ISIN	300	Link and Visual Analysis (None)	3	
ISIN	301	Data Intelligence Competitive Theory (ISIN 300)	3	
ISIN	306	Security Informatics (Sophomore Status or Instructor Permission)	3	
ISIN	308	Principles of Information Security (ISIN 200 or Instructor Permission)	3	
DFOR	310	Digital Forensics and Analysis (ISIN 121 or 308 with C or higher)	3	
ISIN	312	Applications of Information Security ((ISIN 305 or 306) and ISIN 308)	3	
ISIN	317	Fraud Examination (None)	3	
PROJ	320	Project Management Fundamentals (Sophomore Status)	3	
ISIN	325	Database Security (Sophomore Status)	3	
STQM	360	Risk Analysis and Strategy (STQM 260 with C- or higher)	3	
ISIN	380	Current Issues in Information Security and Intelligence (ISIN 308)	3	
ISIN	409	Network Forensics and Analysis (ISIN 200 and 308 both with C- or higher)	3	
ISIN	429	Legal and Ethical Issues in Information Security (Sophomore Status)	3	
ISIN	491	ISI Internship (Junior Status)	3	
ISIN	499	Capstone Experience (Senior Status and Instructor Approval)	3	

BUSINESS COURSE REQUIREMENTS – 15 CREDITS REQUIRED

Prefix	Code	Course Title	Credits	Grade
ACCT	201	Principles of Financial Accounting (MATH 109 or 110 with C- or higher or (MATH 114, 115, 116, 117, 118, 119, 120, 126, 130, 132, or 135 or Math ACT 19 or (Pre-2016) Math SAT 460 or (Post-2016) Math SAT 500))	3	
STQM	260	Introduction to Statistics (MATH 114, 115, 116, 120, 126, 130, 132, or 135 with C- or higher or Math ACT 24 or (Pre-2016) Math SAT 560 or (Post-2016) Math SAT 580)	3	
MGMT	301	Applied Management (None)	3	
MKTG	321	Principles of Marketing (ENGL 150 with C- or higher and Sophomore Status)	3	
MGMT	350	Management Metrics and Decision Making (None)	3	

DIRECTED ELECTIVES – 5 CREDITS REQUIRED

Prefix	Code	Course Title	Credits	Grade

INFORMATION SECURITY AND INTELLIGENCE (ISIN) – 120 CREDITS

Bachelor of Science (BS)

PROPOSED CHECKSHEET

2019-2020

College of Business

CONCENTRATIONS – 12 CREDITS REQUIRED (Prerequisites are shown in parentheses)
 Choose one concentration below or a custom concentration may be developed. Requires advisor approval.

It is important to note that all courses and concentrations may not be available at all campuses.

DIGITAL FORENSICS AND PENETRATION TESTING CONCENTRATION (XXXX) – 12 CREDITS REQUIRED

Prefix	Code	Course Title	Credits	Grade
DFOR	315	Advanced Digital Forensics (DFOR 310 with C or higher)	3	
ISIN	335	Pen Testing and Cloud Security (ISIN 312)	3	
ISIN	430	Pen Testing and Mobile Security (ISIN 312 and 325)	3	
DFOR	454	CyberSec Incident Response (DFOR 315)	3	

DATA MINING CONCENTRATION (DTMN) – 12 CREDITS REQUIRED – AVAILABLE MAIN BIG RAPIDS CAMPUS ONLY

Prefix	Code	Course Title	Credits	Grade
STQM	322	Inferential Statistics (STQM 260 with C- or higher)	3	
ISIN	335	Pen Testing and Cloud Security (ISIN 312)	3	
STQM	342	Data Mining Tools (STQM 270 with C or higher)	3	
STQM	380	Data Mining Processes (STQM 342 with C- or higher)	3	

~~**DIGITAL FORENSICS CONCENTRATION (DGFN) – 12 CREDITS REQUIRED**~~

Prefix	Code	Course Title	Credits	Grade
CITS	270	Network+ (CITS 160 or ISIN 200 with C or higher)	3	
DFOR	315	Advanced Digital Forensics (DFOR 310 with C or higher)	3	
ISIN	335	Pen Testing and Cloud Security (ISIN 312)	3	
		Directed Elective	3	

FOREIGN LANGUAGE CONCENTRATION (FRL) – 12 CREDITS REQUIRED

Prefix	Code	Course Title	Credits	Grade

~~**PENETRATION TESTING AND SECURE SOFTWARE CONCENTRATION (PTSS) – 12 CREDITS REQUIRED**~~

Prefix	Code	Course Title	Credits	Grade
DFOR	315	Advanced Digital Forensics (DFOR 310)	3	
ISIN	335	Pen Testing and Cloud Security (ISIN 312)	3	
ISIN	430	Pen Testing and Mobile Security (ISIN 312 and 325)	3	
		Directed Elective	3	

~~**NETWORK SECURITY CONCENTRATION (NWSC) – 12 CREDITS REQUIRED**~~

Prefix	Code	Course Title	Credits	Grade
CITS	270	Network+ (CITS 160 or ISIN 200 with C or higher)	3	
CITS	280	Linux Administration (ISYS 105 or ISYS 105 Competency or CITS 160 or ISIN 200 with C or higher)	3	
		Directed Elective	3	
		Directed Elective	3	

PROPOSED CHECKSHEET

CUSTOM CONCENTRATION (CUST) OR MINOR (ADVISOR APPROVAL) – 12 CREDITS REQUIRED

Prefix	Code	Course Title	Credits	Grade

NOTES

- Students who return to the university after an interrupted enrollment (not including summer semester) must normally meet the requirements of the curriculum which are in effect at the time of their return, not the requirements which were in effect when they were originally admitted.
- MACRO Stamp with MATH 115 and ENGL 311, 321, and 325 satisfies General Education requirements.
- Although taking classes during summer semester of your first year in the program is optional, doing so will expedite the completion of your degree.

5-YEAR BACHELOR AND MASTER OF SCIENCE INFORMATION SECURITY & INTELLIGENCE PROGRAM

Students may apply to the Masters of Information Security & Intelligence (MISI) program at the end of their junior year. If admitted, the student may substitute the following courses within their Bachelors degree:

- MISI 629 Legal and Ethics for ISIN 429 Legal and Ethics
- PROJ 640 Project Management for PROJ 320 Project Management

ADMISSION REQUIREMENTS

New Students

- Minimum 3.0 High School GPA (on a 4.0 scale)
- Minimum Composite ACT score of 22 and Math ACT score of 22 or SAT minimum Math score of 550.
- All students applying for admission to the ISI program will have to submit a 750 to 1,000-word essay that addresses the following: Who they are and why they desire admission to the ISI program, description of a personal quality, talent, accomplishment, contribution, or experience, and a description of someone that influenced them and why.

Transfer Students

- Combined college or university GPA of 3.0 (on a 4.0 scale) from all institutions attended. GPA based on completion of 24 credit hours or more.
- Completion of the transfer equivalency for FSU's MATH 115 with a grade of C or higher or have either a minimum Math ACT score of 22 or minimum Math SAT score of 550.
- All students applying for admission to the ISI program will have to submit a 750 to 1,000-word essay that addresses the following: Who they are and why they desire admission to the ISI program, description of a personal quality, talent, accomplishment, contribution, or experience, and a description of someone that influenced them and why.

DEGREE OUTCOMES

1. Theory and Practice - Work as a member of an information security and/or intelligence team and effectively integrate theories and practice in an ISI environment
2. Digital Devices - Theorize ways digital devices could be used for security and criminal activity and collect and process digital information in support of an investigation or hypothesis
3. Security Risk Analysis - Develop skills for evaluating organizational structure, environment, and planning strategies for security risk and analyze the effectiveness of a security plan against the methods used by organized crime, gangs and terrorist organizations.
4. Databases - Design, construct and maintain databases in a format consistent with data mining. Analyze these structures in a temporal manner and present findings using a variety of methods including visual analysis tools and techniques.
5. Event Analysis - Recognize the potential for multiple explanations for events and information and be able to analyze and describe the accuracy of the information.
6. Forensic Tools - Utilize digital forensic tools and encryption technology to reconstruct information and recover lost or deleted files in a variety of digital platforms and settings using appropriate methodologies.
7. Networks and Devices - Set up computer networks and peripheral devices, install and maintain software; demonstrate how to handle, transport, utilize and safeguard digital devices and information.
8. ISI Lifecycle - Demonstrate knowledge of concepts and methodologies in information security and the Information Security Lifecycle (Protection) including information security administration, Security+ and CISSP.
9. Digital Forensics Concentration - Demonstrate knowledge of concepts and methodologies of incidence response, cyber forensics (acquisition, preservation, analysis, and presentation of evidence) and the information security lifecycle including cyber laws,
10. GIS and Data Mining Concentration - Demonstrate knowledge of business intelligence and GIS data and the evaluation of analytical data used in strategic decision making including knowledge discovery, tracking, managing and understanding organized data. Students will construct GIS and data mining environments using appropriate tools, techniques, decision support systems, and emerging trends.
11. Sustainability - To be able to obtain the faculty resources for continued growth both in numbers and in locations. Currently over half of the classes taught for both graduate and undergraduate programs is being serviced by adjuncts. Adding to this problem is the fact that there is no system in place to properly integrate the adjunct into the team and to ensure they are mentored and teaching the outcomes required.

GRADUATION REQUIREMENTS

In addition to meeting all the programmatic requirements, students must:

1. Meet University General Education requirements.
2. Earn a minimum of 120 credits.
3. Maintain a 2.00 or higher cumulative FSU GPA.
4. Earn 30 credits from FSU (Residency).
5. Earn 40 credits of 300 level or higher courses.
6. Maintain a 2.00 cumulative GPA in the major, which includes business, major, **elective**, and concentration courses.

CONTACT INFORMATION

COLLEGE: College of Business
DEPARTMENT/SCHOOL: AFIS/College of Business

PHONE: 231-591-2434
EMAIL: afis@ferris.edu

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INFORMATION SECURITY AND INTELLIGENCE (ISIN) – 120 CREDITS

Bachelor of Science (BS)

PROPOSED CHECKSHEET

2019-2020

College of Business

SEMESTER LAYOUT OF COURSES - EXCLUDING SUMMER SEMESTERS**FIRST YEAR**

Fall Courses	Credits
COMM 105 or 121	3
Culture Competency	3
ENGL 150	3
ISIN 121	3
MATH 114 or 115	3-4
Total Credits	15-16

Spring Courses	Credits
ENGL 250	3
ISIN 200	3
Natural Sciences Competency	3
Self and Society Competency	3
STQM 260	3
Total Credits	15

Summer Courses	Credits
Total Credits	

SECOND YEAR

Fall Courses	Credits
Culture Competency	3
ISIN 308	3
ECON 221	3
ISIN 209	3
ISIN 306	3
Total Credits	15

Spring Courses	Credits
ACCT 201	3
ISIN 300	3
Self and Society Competency	3
DFOR 310	3
ENGL 311, 321, or 325	3
Total Credits	15

Summer Courses	Credits
Total Credits	

THIRD YEAR

Fall Courses	Credits
MGMT 301	3
MKTG 321	3
Natural Sciences Competency	4
ISIN 325	3
STQM 270	3
Total Credits	16

Spring Courses	Credits
ISIN 312	3
ISIN 409	3
STQM 360	3
ISIN 380	3
Concentration Course 1	3
Total Credits	15

Summer Courses	Credits
Total Credits	

FOURTH YEAR

Fall Courses	Credits
Culture Competency 200+	3
Concentration Course 2	3
Concentration Course 3	3
ISIN 301	3
ISIN 317	3
Total Credits	15

Spring Courses	Credits
ISIN 499	3
ISIN 429 or MISI 629	3
PROJ 320 or 640	3
Concentration Course 4	3
Total Credits	12

Summer Courses	Credits
Total Credits	

INFORMATION SECURITY AND INTELLIGENCE (ISIN) – 120 CREDITS

Bachelor of Science (BS)

PROPOSED CHECKSHEET

2019-2020

College of Business

SEMESTER LAYOUT OF COURSES - INCLUDING SUMMER SEMESTERS**FIRST YEAR**

Fall Courses	Credits
Culture Competency	3
ENGL 150	3
ISIN 121	3
COMM 121 or 105	3
MATH 114 or 115	3-4
Total Credits	15-16

Spring Courses	Credits
Self and Society Competency	3
ENGL 250	3
ISIN 200	3
Natural Sciences Competency	3
STQM 260	3
Total Credits	15

Summer Courses	Credits
ISIN 306	3
ISIN 317	3
Total Credits	6

SECOND YEAR

Fall Courses	Credits
Self and Society Competency	3
ISIN 308	3
ECON 221	3
ISIN 209	3
ENGL 311, 321, or 325	3
Total Credits	15

Spring Courses	Credits
ACCT 201	3
Culture Competency 200+	3
ISIN 301	3
DFOR 310	3
ISIN 380	3
Total Credits	15

Summer Courses	Credits
ISIN 300	3
STQM 360	3
Total Credits	6

THIRD YEAR

Fall Courses	Credits
MGMT 301	3
MKTG 321	3
Natural Sciences Competency	4
Culture Competency	3
STQM 270	3
Total Credits	16

Spring Courses	Credits
ISIN 312	3
ISIN 409	3
Concentration Course 1	3
ISIN 429 or MISI 629	3
Concentration Course 2	3
Total Credits	15

Summer Courses	Credits
ISIN 491	3
ISIN 325	3
Total Credits	6

FOURTH YEAR

Fall Courses	Credits
ISIN 499	3
PROJ 320 or 640	3
Concentration Course 3	3
Concentration Course 4	3
Total Credits	12

Spring Courses	Credits
Total Credits	

Summer Courses	Credits
Total Credits	

Student Name: _____

Student ID: _____

Prerequisites shown in parenthesis

REQUIRED COURSES – 12 Credits Required			Crs.	Gr.
ISIN	200	Secure Digital Technologies (None)	3	
ISIN	308	Principles of Information Security (ISIN 200 or Instructor Permission)	3	
DFOR	310	Digital Forensics and Analysis (ISIN 121 or ISIN 308 w/C or higher)	3	
ISIN	325	Database Security (Sophomore Status)	3	

ELECTIVES – 6 Credits Required (Advisor Approval required)				
CHOOSE TWO	ISIN 300	Link and Visual Analysis (None)	3	
	ISIN 301	Data Intelligence Competitive Theory (ISIN 300)	3	
	ISIN 305	Developing a Web Presence (Sophomore Status or Instructor Permission)	3	
	ISIN 306	Security Informatics (Sophomore Status or Instructor Permission)	3	
	ISIN 312	Applications of Information Security ((ISIN 305 or ISIN 306) and ISIN 308)	3	
	DFOR 315	Advanced Digital Forensics (DFOR 310 w/C or higher)	3	
	ISIN 317	Fraud Examination (None)	3	
	ISIN 335	Pen Testing and Cloud Security (ISIN 312)	3	
	ISIN 380	Current Issues in Information Security and Intelligence (ISIN 308)	3	
	ISIN 409	Network Forensics and Analysis (ISIN 200 and ISIN 308 w/C- or higher)	3	
	ISIN 429	Legal and Ethical Issues in Information Security (Sophomore Status)	3	
	ISIN 430	Pen Testing and Mobile Security (ISIN 312 and ISIN 325)	3	

CUSTOM ELECTIVE COURSES RECOMMENDED BY THE ISI FACULTY ADVISOR			Crs.	Gr.

DECLARATION OF MINOR

In addition to their major the student must declare the minor with the advisor **AFIS Department, (231) 591-2434, BUS 212.**

STUDENT Signature _____

Date _____

MINOR ADVISOR Signature _____

Date _____

DEPARTMENT HEAD/CHAIR Signature _____

Date _____

INFORMATION SECURITY AND INTELLIGENCE – 21 Credits

Minor

CURRENT CHECKSHEET

College of Business

ADMISSION REQUIREMENTS

Any person who is admitted to a Ferris State University Bachelor's degree program is welcome to obtain this minor.

ADDITIONAL GRADUATION REQUIREMENTS

1. At least one-half of the credits must be Ferris State University credits.
2. A maximum of 1/3 of the credits, but no more than 7 credits, may overlap with the student's major.
3. A minimum of fifty percent (50%) of the courses in the minor must be at the 200 or above level.
4. A 2.00 GPA is required for completion of the Minor.

Notes:

1. Upon declaration of Minor, a Program Change is submitted to declare the Minor.
2. Minor requirements must be completed prior to, or concurrently with completion of a Bachelor degree.
3. A term prior to completion of the Minor, the student will log into MyFSU, and complete the "Apply for Graduation". You will receive an email back with the next steps to take. Once this is done the Graduation Secretary will notify the Registrar who will note the completion of the Minor.

NOTICE: Students who return to the university after an interrupted enrollment (not including summer semester) must normally meet the requirements of the curriculum, which are in effect at the time of their return, not the requirements which were in effect when they were originally admitted.

INFORMATION SECURITY AND INTELLIGENCE (ISIN) – 18 CREDITS
2019-2020

Minor

PROPOSED CHECKSHEET

College of Business

Student Name	Student ID

ALL MINOR REQUIREMENTS – 18 CREDITS REQUIRED

(Prerequisites are shown in parentheses)

MINOR COURSES – 12 CREDITS REQUIRED

Prefix	Code	Course Title	Credits	Grade
ISIN	121	Digital Security Awareness (None)	3	
ISIN	200	Secure Digital Technologies (ISIN 121 with C- or higher)	3	
ISIN	308	Principles of Information Security (ISIN 200 or Instructor Permission)	3	
DFOR	310	Digital Forensics and Analysis (ISIN 121 or 308 with C or higher)	3	
ISIN	325	Database Security (Sophomore Status)	3	

ELECTIVES – 6 CREDITS REQUIRED (ADVISOR APPROVAL)

Prefix	Code	Course Title	Credits	Grade
CHOOSE 2 OF 15	ISIN 209	Network Security (ISIN 200 with C- or higher)	3	
	ISIN 300	Link and Visual Analysis (None)	3	
	ISIN 301	Data Intelligence Competitive Theory (ISIN 300)	3	
	ISIN 305	Developing a Web Presence (Sophomore Status or Instructor Permission)	3	
	ISIN 306	Security Informatics (Sophomore Status or Instructor Permission)	3	
	ISIN 312	Applications of Information Security ((ISIN 305 or 306) and 308)	3	
	DFOR 315	Advanced Digital Forensics (DFOR 310 with C or higher)	3	
	ISIN 317	Fraud Examination (None)	3	
	ISIN 325	Database Security (Sophomore Status)	3	
	ISIN 335	Pen Testing and Cloud Security (ISIN 312)	3	
	ISIN 380	Current Issues in Information Security and Intelligence (ISIN 308)	3	
	ISIN 409	Network Forensics and Analysis (ISIN 200 and 308 both with C- or higher)	3	
	ISIN 429	Legal and Ethical Issues in Information Security (Sophomore Status)	3	
	ISIN 430	Pen Testing and Mobile Security (ISIN 312 and 325)	3	
	DFOR 454	CyberSec Incident Response (DFOR 315)	3	
	<i>Directed Elective</i>	3		

NOTES

- Students who return to the university after an interrupted enrollment (not including summer semester) must normally meet the requirements of the curriculum which are in effect at the time of their return, not the requirements which were in effect when they were originally admitted.
- Upon declaration of Minor, a program change is submitted to declare the Minor.
- Minor requirements must be completed prior to, or concurrently with completion of a Bachelor degree.
- A term prior to completion of the minor, log into MyFSU and complete the "Apply for Graduation". You will receive an email back with the next steps to take. Once this is done the Graduation Secretary will notify the Registrar who will note the completion of the Minor.

PROPOSED CHECKSHEET

ADMISSION REQUIREMENTS

New Students

- Student must be admitted to the university and pursuing a baccalaureate degree.

Transfer Students

- Student must be admitted to the university and pursuing a baccalaureate degree.

GRADUATION REQUIREMENTS

In addition to meeting all the programmatic requirements, students must:

1. Maintain a 2.00 or higher cumulative FSU GPA.
2. Earn 50% of the minor credits from FSU (Residency).
3. Earn a maximum of 1/3 credits, but no more than 7 credits, that overlap with their major.
4. Earn 50% of the credits at the 200 level or higher.

CONTACT INFORMATION

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DECLARATION OF MINOR

Role	Signature	Date
Student		
Minor Advisor		
Department Head/Chair		