



UNIVERSITY of WASHINGTON

Michael K. Young
President

April 30, 2014

Vice Chancellor J.W. Harrington
University of Washington, Tacoma
Box 358430

Dear J.W.:

Based upon the recommendations of the Faculty Council on Academic Policy, the Faculty Assembly has recommended approval of an option in Information Assurance and Cybersecurity within the Bachelor of Science degree in Information Technology and Systems. A copy of the approval is attached.

I am writing to inform you that the Office of Academic Affairs is authorized to specify these requirements beginning summer quarter 2014.

The new requirements should be incorporated in printed statements and in individual department websites as soon as possible. The *General Catalog* website will be updated accordingly by the Registrar's Office.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Michael K. Young".

Michael K. Young
President

Enclosure

cc: Dr. Sam Chung (with enclosure)
Ms. Zaide Chavez (with enclosure)
Mr. Robert Corbett (with enclosure)
Ms. Virjean Edwards (with enclosure)



UNIVERSITY OF WASHINGTON

CREATING AND CHANGING UNDERGRADUATE
ACADEMIC PROGRAMS

After college/school/campus review, send a signed original and 1 copy to the Curriculum Office/FCAS, Box 355850.
For information about when and how to use this form: <http://depts.washington.edu/uwcr/1503instructions.pdf>

OFFICE USE ONLY
Control #
TINST-20131205

College/Campus: UW Tacoma

Department/Unit: Institute of Technology

Date 12/05/2013

New Programs

- ☐ Leading to a Bachelor of ____ in ____ degree.
☐ Leading to a Bachelor of ____ degree with a major in ____.
☒ Leading to an Information Assurance and Cybersecurity Option within the existing major in Bachelor of Science in Information

Technology and Systems.

- ☐ Leading to a minor in ____

Changes to Existing Programs

- ☐ New Admission Requirements for the Major in ____ within the Bachelor of ____.
☐ Revised Admission Requirements for the Major in ____ within the Bachelor of ____.
☐ Revised Program Requirements for the Major in ____ within the Bachelor of ____.
☐ Revised Requirements for the Option in ____ within the major in ____.
☐ Revised Requirements for the Minor in ____.

Other Changes

- ☐ Change name of program from ____ to ____.
☐ Change delivery method or location of program.
☐ New or Revised Continuation Policy for ____.
☐ New Honors Requirements for ____.
☐ Eliminate program in ____.

Proposed Effective Date: Quarter: ☐ Autumn ☐ Winter ☐ Spring ☒ Summer Year: 2014

Contact Person: Dr. Sam Chung

Phone: (253) 692-5886

Email: chungsa@uw.edu

Box: 358426

EXPLANATION OF AND RATIONALE FOR PROPOSED CHANGE

For new program, please include any relevant supporting documentation such as student learning outcomes, projected enrollments, letters of support and departmental handouts. (Use additional pages if necessary).

[See attached Supplement 1: Rationale]


OTHER DEPARTMENTS AFFECTED

List all departments/units/ or co-accredited programs affected by your new program or changes to your existing program and acquire the signature of the chair/director of each department/unit listed. Attach additional page(s) if necessary. *See online instructions.

Department/Unit:
Information School, UW Seattle
School of STEM, UW Bothell

Chair/Program Director:
Matthew Saxton, Associate Dean for Academics *Matthew Saxton*
Elaine Scott, Dean *Elaine Scott*
Mike Stiber, Associate Dean *Mike Stiber*

Date:
12/5/2013

Department/Unit: Information and Technology Systems at the Institute of Technology at UW Tacoma	Chair/Program Director: Rob Friedman, Director 	Date: 12/05/2013
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CATALOG COPY

Catalog Copy as currently written. Include only sections/paragraphs that would be changed if your request is approved. Please cross out or otherwise highlight any deletions.

[No deletions, only additions. See below.]

PROPOSED CATALOG COPY

Reflecting requested changes (Include exact wording as you wish it to be shown in the printed catalog. Please underline or otherwise highlight any additions. If needed, attach a separate, expanded version of the changes that might appear in department publications).
Please note: all copy will be edited to reflect uniform style in the General Catalog.






[to be appended at the end of the "Options" section in "Major Requirements"]

Information Assurance and Cybersecurity Option (16-20 credits).

1. The foundational course, INFO 310, "Information Assurance and Cybersecurity" or equivalent course (5 credits). Equivalent courses will be offered at all three University of Washington campuses: The Information School at UW Seattle, Computing and Software Systems at UW Bothell, and the Institute of Technology at UW Tacoma.
2. Minimum of three other courses from an approved list (11-15 credits). This list includes courses at participating departments on all three UW campuses. See program website for list:
<http://ischool.uw.edu/academics/informatics/degree-options>.
 - a. *No more than one of these courses may be a networking course. Networking course are: INFO 341, T INFO 250, & CSS 432.*

[See attached Supplement 2 for **current** approved course list.]

APPROVALS

Chair/Program Director: Robert Friedman, Director 	Date: 12/05/2013
College/School/Campus Curriculum Committee: 	Date: 1-29-2014
Dean/Vice Chancellor: 	Date: 1-29-2014
Faculty Council on Academic Standards/ General Faculty Organization/Faculty Assembly Chair: 	Date: 1-29-2014
POST TRI-CAMPUS APPROVAL (when needed)	
Faculty Council on Academic Standards/ General Faculty Organization/Faculty Assembly Chair: 	Date: 3-25-2014

December 5, 2013

MEMORANDUM

To: Faculty Council on Academic Standards, UW Seattle
General Faculty Organization, UW Bothell
Faculty Assembly, UW Tacoma

From: Matthew Saxton, Associate Dean for Academics, Information School, UW Seattle *MS*
Elaine Scott, Dean, School of STEM, UW Bothell *ES*
Mike Stiber, Associate Dean, School of STEM, UW Bothell *MS*
Rob Friedman, Director, Institute of Technology, UW Tacoma *RF*

RE: Tri-campus collaboration on Information Assurance and Cybersecurity (IAC) option

We live during a time where our dependence on technology and ever-increasing interconnections has left us vulnerable to both the intentional malicious and accidental actions of others. As a creator of future information technology professionals, the University of Washington must properly equip students with the knowledge to develop and utilize tools and applications that are safe and secure. Information Assurance and Cybersecurity (IAC) is the practice of creating and managing safe and secure systems. It is crucial for organizations public and private, large and small. Managers, developers, policy makers, and end-users alike must understand the need for maintaining the privacy and security of personal and institutional information.

At the University of Washington, we have faculty experts in various aspects of IAC located on all three campuses who have come together to develop a tri-campus transcriptable option in IAC. With this option, students will be equipped with the knowledge and skills to create, deploy, use, and manage systems that preserve individual and organizational privacy and security.

Our three programs are submitting the requisite documentation to establish the IAC transcriptable option within our undergraduate majors in Autumn 2013, to take effect Spring 2014. We each fully support the others' requests to approve a transcriptable option in IAC.

IAC is a constantly developing field and the University of Washington is becoming a global leader. We have exceptional faculty collaborating on world-class research, and by working together we will be able to extend our collaboration directly to our students in the classroom.

We believe that this is another example of a strong and growing partnership across our campuses, and that this partnership will establish the University of Washington as a leader in Information Assurance and Cybersecurity on the West Coast and across the nation.

BACHELOR OF SCIENCE IN INFORMATICS

TRANSCRIPTABLE OPTION IN INFORMATION ASSURANCE AND CYBERSECURITY

SUPPLEMENT 1: RATIONALE

We live during a time where our dependence on technology and ever-increasing interconnections has left us vulnerable to both the intentional malicious and accidental actions of others. The University of Washington provides numerous undergraduate technical degrees but none with a focus and concentration on cybersecurity and privacy that the current IT climate necessitates. As a creator of future information technology professionals the University of Washington must properly equip students with the knowledge to develop and utilize tools and applications that are safe and secure. Managers, policy makers, developers, and end-users alike should be able create, deploy, utilize, and manage systems that preserve individual and organizational privacy and security.

Information Assurance and Cybersecurity (IAC) is the practice of creating and managing safe and secure systems. It is crucial for organizations public and private, large and small. In the IAC option, students will be equipped with the knowledge to create, deploy, use, and manage systems that preserve individual and organizational privacy and security.

This option to the Informatics program is being proposed in conjunction with new options at (1) the Division of Computing and Software Systems at the School of Science, Technology, Engineering, and Math at UW Bothell and (2) the Information and Technology Systems program in the Institute of Technology at UW Tacoma. This proposal leverages the strengths of all three programs. Students will take the same foundational course in the technical, policy, and management foundations of IAC at their home campus. They will then choose different electives at any campus to learn such specialties as information assurance policy, secure coding, or networking and systems security. The electives at each campus will focus on the particular strengths of that program.

The combination of all three campuses working together on a unified concentration provides a greater opportunity for students attending one campus to learn from faculty across all three campuses. This flexibility will give students greater access to courses than would be available at any single campus and enhance the ability for students to customize their learning and career goals. It also is much more efficient than each institution building its own program. Some courses may be offered online or in hybrid format to encourage enrollment from students across campuses.

After completing the concentration, students will be well equipped with the knowledge and skills necessary to enter the field of information assurance and cybersecurity as professionals. They will be prepared to succeed in this rapidly growing field.

TRI-CAMPUS TRANSCRIPTABLE OPTION IN INFORMATION ASSURANCE AND CYBERSECURITY

SUPPLEMENT 2: IAC COURSES

Core Class: Any one of the following equivalent courses:

- CSS 310: Information Assurance and Cybersecurity
- INFO 310: Information Assurance and Cybersecurity
- **T INFO 310: Information Assurance and Cybersecurity (currently T INFO 340)**

UW Bothell electives:

- CSS 337: Secure Systems
- CSS 415 – Emerging Topics in IAC
- CSS 432: Network Design*
- CSS 411: Computing Technology and Public Policy

UW Seattle electives:

- INFO 312: Enterprise Risk Management (submitted to UWCC)
- INFO 341: Computer Networks and Distributed Applications*
- INFO 415 – Emerging Topics in IAC (submitted to UWCC)

UW Tacoma electives:

- **T INFO 250: Foundations of Information Networking***
- **T INFO 415 – Emerging Topics in IAC**
- **T INFO 441: Network Security**
- **T INFO 442: Computer Security**
- **T INFO 443: Digital Forensics**

** Networking course: only one may count towards IAC option*

CORE CLASS:

CSS 310 / INFO 310 / T INFO 310 Information Assurance and Cybersecurity (5)

Theoretical and practical introduction to information assurance and cybersecurity (IAC). Methods and practices for securing information and information systems. Learn how vulnerabilities arise, recognize evolving threats, and mitigate them. Explores the role of risk analysis, information privacy, accountability, and policy.

BOTHELL COMPUTING AND SOFTWARE SYSTEMS ELECTIVES:

CSS 337 Secure Systems (5)

Prepares students for deploying and operating secure systems on a heterogeneous distributed infrastructure. Covers cybersecurity principles, methods, and tools used to protect against and detect external and internal threats. Addresses ethical and professional issues for cybersecurity personnel. Assumes students have basic computer administration skills. Prerequisite: CSS 161.

CSS 432 Network Design (5)

Examines methods for designing LANs and WANs that optimize Quality of Service (QoS). Covers theoretical and practical element of the OSI protocol stack; routing protocols including OSPF and BGP; networking management/architecture; router configuration; security; and Internet policies. Explores emerging networking technologies. Prerequisite: CSS 301; either CSS 421 or CSS 422 which may be taken concurrently; may not be repeated.

CSS 411 Computing Technology and Public Policy (5)

In depth investigation of economical, political, organizational, and societal ramifications of using computing technology. Evaluates current policy approaches, determines trends, and proposes changes. Topics vary by quarter.

SEATTLE INFORMATION SCHOOL ELECTIVES:

INFO 312 Risk Management (5)

Learn risk assessment, risk mitigation, and risk management and communicate this information to stakeholders. Learn risk management frameworks and theory. Technological, regulatory, and financial implications for risk and risk management. Examine how mobile, cloud, and social media technology influence risk in small organizations and large enterprises.

INFO 341 Computer Networks and Distributed Applications (5)

Basic concepts of local and wide-area computer networking including an overview of services provided by networks, network topologies and hardware, packet switching, client/server architectures, network protocols, and network servers and applications. Also addresses management, security, authentication, and policy issues associated with distributed systems. Prerequisite: either CSE 142, CSS 161, or T INFO 142.

INFO 415 Emerging Topics in Information Assurance and Cybersecurity (1-5, max 15)
Explores emerging topics and unique subjects in Information Assurance and Cybersecurity (IAC) not otherwise covered in the IAC curriculum. Intended for students in the IAC option at any of the UW campuses. Topics vary by quarter. May be repeated for credit.
Prerequisite: either CSS 310, INFO 310, or T INFO 310.

TACOMA INFORMATION TECHNOLOGY AND SYSTEMS ELECTIVES:

T INFO 250 Foundations of Information Networking (5)
Explores computer networking and telecommunications fundamentals including LANs, WANs, Intranets, and the World Wide Web. Studies data communication concepts, models, and protocols. Practices installation, configuration, systems integration, and management of infrastructure technologies.

T INFO 441 Network Security (5)
Covers cryptographic methods including public and private key algorithms. Examines protocols that utilize secure email, digital signatures, authorization, e-voting, and electronic cash. Examines the fundamentals of security issues arising from computer networks. Includes lab component for demonstration of security techniques such as firewalls, intrusion detection systems, and virtual private networks. Prerequisite: T INFO 340.

T INFO 442 Computer Security (5)
Discusses the theoretical and practical issues surrounding computer security and data protection. Explores formal models of encryption and authentication. Examines operating system and program security with vulnerabilities analyses. Includes a lab component for demonstrating computer security techniques such as malware analysis, and access control. Prerequisite: T INFO 310; either T INFO 250, CSS 432, or INFO 341.

T INFO 443 Digital Forensics (5)
Explores the many facets of computer forensics and network security. Examines intrusion detection, evidence collection and presentation, network auditing, and network security policy design and implementation. Examines the issues and facilities available to the intruder and data network administrator and incorporates hands-on exercises. Prerequisite: T INFO 310; either T INFO 250, CSS 432, or INFO 341.

Undergraduate Curriculum Review Process for New Programs

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Tacoma: Option in Information Assurance and Cybersecurity within the Bachelor of Science degree in Information Technology and Systems (TINST-20131205)

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Please review the attached 1503 pdf requesting to establish an option in Information Assurance and Cybersecurity within the Bachelor of Science degree in Information Technology and Systems at the Tacoma campus and post comments by 5:00 pm on Tuesday, March 4th.

If you have any problems viewing the attachment or need disability accommodations, please contact the University Curriculum Office at uwcr@uw.edu.


[TINST-20131205.pdf](#)
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Common formatting keyboard shortcuts:
Control Shift B sets text to bold
Control Shift I sets text to italic
Control Shift U underlines text
Control Shift L aligns text left
Control Shift J aligns text center
Control Shift R aligns text right
Control Shift K adds an HTML link
To exit this text editor use the keyboard shortcut Control + Shift + ESC.

UNIVERSITY CAMPUSES UNDERGRADUATE PROGRAM REVIEW PROCEDURES**

CHECKLIST

Title of Proposal: Option in Information Assurance and Cybersecurity within
the Bachelor of Science degree in Information Technology
and Systems (TINST-20131205)

Proposed by (unit name): Institute of Technology

Originating Campus:

☐ UW, Seattle

☐ UW, Bothell

☒ UW, Tacoma

I. Phase I. Developed Proposal Review (to be completed by Originating Campus' Academic Program Review body)

A. Review Completed by: (list name of program review body)

Chaired by:

01/29/14 Date proposal received by originating campus's review body

02/04/14 Date proposal sent to University Registrar

02/11/14 Date proposal posted & email sent to standard notification list

03/15/14 Date of originating campus's curriculum body approval

(Note: this date must be 15 business days or more following date of posting)

B. 0 Number of comments received. Attach the comments and a summary of the
consideration and responses thereof : (1-2 paragraphs)

II. Phase II. Final Proposal Review (to be completed by FCTCP)

A. Review Completed by:

☒ FCTCP subcommittee

☐ FCTCP full council

Chaired by: William Erdly

4/4/14 Date request for review received from University Registrar

4/22/14 Date of FCTCP report

B. Review (attached)

YES NO

- ☒ Was notice of proposal posted on UW Website for 15 business days?
☒ Was notice of proposal sent to standard mailing list 15 business days in advance of academic program review?
☒ Were comments received by academic program review body?
☒ Was response to comments appropriate? (explain, if necessary)
☒ Was final proposal reviewed by FCTCP within 14 days of receipt?
☒ Was there adherence to the University Campuses Undergraduate Program Review Process? (explain, if necessary)

Note: Slight delay in FCTCP report due to meeting schedule.

C. Recommendation

- ☒ Forward for final approval
☐ Forward to Provost because of University issues (Explain)
☐ Return to campus council because of insufficient review (Explain).

**Endorsed by Faculty Senate Executive Committee, 1/10/05, modified 1/31/06; These procedures apply to new undergraduate degrees, majors, minors (and certificates) and substantive changes to same