

# CAPSTONE PROJECT 2018-19

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# AGENDA

- What is Capstone Project?
- Significance of Capstone Project
- Misconceptions
- Role of Supervisor, Coordinator, and Capstone Team
- How to choose Supervisor?
- Evaluation Criteria
- Get others know your work

# GLOSSARY

- **FYP**: BS Final Year Project / Capstone Project
- **Faculty**: Regular/Contractual Faculty
- **Capstone Committee**: Committee responsible for approving FYP
- **Supervisor**: A person responsible for the supervision of student's **FYP**. He may be a member of UOS **Faculty** or an expert of relevant area from outside
- **Examiner**: A member of UOS **Faculty** or an expert of the relevant area from outside.

# GLOSSARY

- **FYP Coordinator:** Faculty member responsible for weekly task allocation and monitoring.
- **Student:** Registered Student of UOS – CSIT department.
- **Capstone Group:** A group of maximum 3 students formed for the purpose of doing capstone project.





# WHAT IS CAPSTONE PROJECT?

- **Capstone** : A stone fixed on top of something / A large flat stone forming a roof over the chamber
- **Capstone Project** : A two semester process in which independent research/work on a question or problem of their choice with guidance of a faculty mentor. Also engage in **scholarly debates**.
- Capstone Project intensively tests Computing, Analytical, Algorithmic, and Software Engineering skills that you have gained in your BS degree.



# CAPSTONE PROJECT: STEPS

- Select area of interest
- Come up with an idea
- Write a comprehensive proposal
  - Scope
  - Application Area
  - Complexity
  - Size
  - Innovation
- These 5 factors are actually **success** / **failure** of any project.





# CAPSTONE PROJECT: STEPS

- Implementation for both Development and **Research Projects**
- Testing for Development Projects / Experimentation for Research Projects
- Conclude your project.





# CAPSTONE PROJECT STAKE HOLDERS

- Capstone Group
- Capstone Committee
- Capstone Coordinator
- Capstone Supervisor

# CAPSTONE GROUP

- Individual Marking
- Divide tasks among group members
- Don't take free riders in the group.
- Project marking is inversely proportional to the size of group.
- Try to create balanced groups with a mix of Skills, Programming Skills, Analytical Skills, and Communication Skills.
- Maximum group size is 5



# ROLE OF CAPSTONE SUPERVISOR

- **Biggest** Role and No Role
- Carefully choose your supervisor
- Suits your area of interest
- No conflicts





# ROLE OF CAPSTONE COORDINATOR

- **Capstone II Coordinators  
Spring17**

- Mr. Saad Razzaq
- Mr. Abid Rafiq
- Mr. Fahad Maqbool
- Mr. Ahmed Farid
- Mr. M. Kaleem

- **Capstone Zero Coordinators  
Spring17**

- Mr. Waqas
- Mr. Taimoor
- Ms. Saba

- ✓ Capstone coordinators conduct weekly 3 hours capstone classes
- ✓ Assigns weekly tasks/deliverables and mark them
- ✓ Capstone Coordinators hold almost 60% of the total marks. i.e. 120/200

# ROLE OF CAPSTONE COMMITTEE

- Capstone Committee coordinates with Capstone Coordinators to keep the deliverables of all classes on schedule.
- May assign supervisors to capstone groups on demand.
- Make schedules and assigns evaluators to each capstone group.
- Deals any appeal/issue in Capstone Projects
- Committee would be responsible for approving Capstone Project
- Propose the evaluation criteria and marking division

# ROLE OF CAPSTONE COMMITTEE

- Current Capstone Committee Members include  
**Mr. Saad Razzaq**                      Mr. Fahad Maqbool  
Mr. M. Kaleem



# CAPSTONE SUPERVISORS

- Dr. M. D. Chaudhary
  - Computer Graphics, Neural Networks
- Mr. Abid Rafiq
  - HCI, Software Engineering, Project Management
- Mr. Saad Razzaq
  - Machine Learning, Artificial Intelligence, Robotics, Big Data, Sentiment Analysis, Opinion Mining, Urdu Language Processing
- Mr. Ahmed Fareed
  - Networks, Data Communication, Network Security

# CAPSTONE SUPERVISORS

- **Fahad Maqbool**
  - Big Data, Large Scale Machine Learning, Data Warehouses, Link Prediction, Open Linked Knowledge, Swarm Intelligence, Algorithms
- **Dr. Humaira**
  - Networks, Cloud Computing
- **Ms. Bushra**
  - Deep Learning, Web Development, Desktop Application, Java Application
- **Mr. Iqbal**
  - Web Development, Desktop Applications, Java Application

# CAPSTONE SUPERVISORS

- **Mr. Fakhar Mangla**
  - Digital Image Processing, Algorithms, Computer Vision, Compilers
- **Mr. Kaleem**
  - Micro Controllers, Data Mining, Architecture
- **Mr. Ramzan Malik**
  - Software Engineering, Desktop Apps
- **Ms. Kinza**
  - Software Engg, Desktop Apps, Web Apps



# CAPSTONE SUPERVISORS

- Mr. Amir Zia
  - Android Apps, Web Apps, Desktop Apps
- Mr. Hafiz Faisal
  - Android Apps, Web Apps, Desktop Apps
- Mr. Farooq
  - Networks, Cryptography, Network Security
- Ms. Salman Jajja
  - Desktop Apps, Digital Logic Design

# CAPSTONE SUPERVISORS

- Mr. Bilal
  - Software Engg, SPM, Desktop Apps, Web Apps, Android Apps
- Mr. Azhar
  - Sentiment Analysis, Desktop Apps, Web Apps, Android Apps
- Mr. Saud
  - Data Science, Game Development, Android Apps, Desktop Apps
- Mr. Nisar
  - Desktop Apps

# CAPSTONE SUPERVISORS

- Ms. Shaista
  - Web Apps, Desktop Apps
- Ms. Sidra
  - Networks, Web Apps, Desktop Apps
- Ms. Qaisra
  - Software Engg, Web Apps, Desktop Apps
- Ms. Farhana
  - Soft Computing, Automata, Compilers



# CAPSTONE SUPERVISORS – VISITING FACULTY

- Mr. Abdul Qadeer
- Mr. Shahroze
- Ms. Aqsa Zahoor
- Ms. Sadaf
- Ms. Urooj
- Mr. Ali Raza
- Mr. Dahir Zeb Bajwa
- Mr. Zain Sherazi

# CAPSTONE SUPERVISORS – VISITING FACULTY

- Ms. Anum Lodhi
- Mr. Shahid Islam
- Mr. Salman Tiwana
- Mr. Ameer Hamza

# CAPSTONE PROJECT PROCESS

- **Students** selects a capstone project in consultation with faculty and submit capstone proposal early summer to Capstone Committee.
- **Group** studies about the **FYP** and makes a 3 page **FYP** proposal which includes a brief introduction of the **FYP** and a brief details mentioning the basic requirements and scope of the **FYP**. These details are mutually decided by the **Supervisor** and the **Group**. It will also include a high level plan with a schedule for deliverables.
- The **FYP** proposals are submitted to the **Capstone Committee**.



# CAPSTONE PROJECT PROCESS

- To register for Capstone I in Fall-2017, it is mandatory that students get their capstone proposal approved in Spring-2017.
  - At start of Spring-2017 semester student will submit introduction, SRS, and SDS in case of development projects.
  - While in case of research projects students will submit introduction, Literature Review, and Proposed Methodology at start of Spring 2017.
- NOTE: It is a team work that can be done by dividing the tasks and completing at your home place. No need to stay in hostels.**

# CAPSTONE PROJECT PROCESS

- Capstone committee approves the project and may suggest amendments.
- No change in **FYP** or **Supervisor** is allowed without the consent of the **Capstone Committee** after this step.
- If the proposal is not approved, the **Group** selects a new **FYP** and repeats step number 3 within next two weeks. The **Group** continues with the **FYP** only if the **Capstone Committee** through consensus approves the new **FYP** proposal.

# CAPSTONE PROJECT PROCESS

- Capstone I Mid Semester Evaluation will be held in the 9th week. Capstone group will prepare an A2 size poster about their **FYP**. The posters will be placed on open display. Posters will be reviewed by the **Capstone Committee** or any of their nominee which awards first, second and third positions.
- Group will start the implementation at start of Fall 2017 semester.
- The **Group** submits the Capstone I report and delivers a presentation and software demo 2 weeks before the end of Fall 2017 semester. This will be graded by **Capstone Coordinator**.



# CAPSTONE PROJECT PROCESS

- Report also includes the work to be done in next semester and its schedule.
- Those **Students** who have passed **FYP-I** registers for the **FYP-II** course (3 credit hours only) and continues with their allotted FYP.
- Mid Semester Evaluation will be held in 7<sup>th</sup> week of Spring 2018 semester. The **Group** will give a demonstration of its **FYP**. The demo will be graded by the **Capstone Coordinator**.
- The final evaluation and presentation will be in 14<sup>th</sup> week of Spring 2018 semester. A comprehensive but tentative **FYP** report is submitted before the presentation.

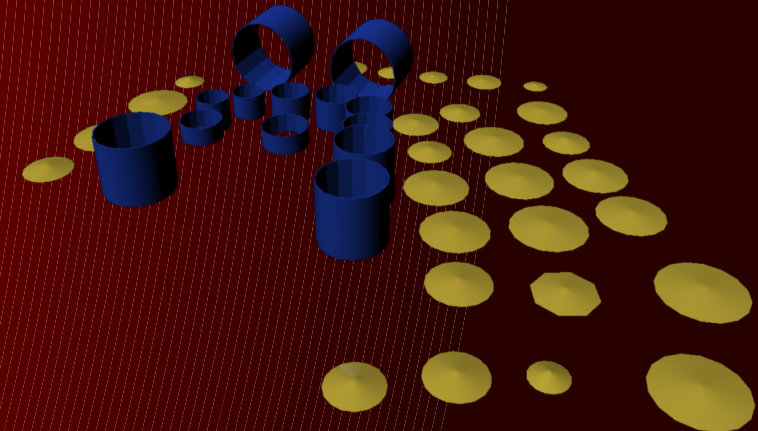
# CAPSTONE PROJECT PROCESS – FINAL STEP

- **Capstone Committee** assigns the examiner to each capstone group and also displays the schedule of evaluation.
- The **Group** submits the Final **FYP** Report and all other deliverables after final evaluation to the **Capstone Committee**. The submitted report and deliverables includes the corrections and amendments proposed during the final evaluation. The report is graded by the **Supervisor** in consultation with the **Examiner**.



# SIGNIFICANCE OF CAPSTONE PROJECT

- Capstone Project is of 6 credit hours carrying 200 marks and duration of almost last 270 Days of your degree.
- Face of your degree.
- Part of your CV & part of questioning during job/ further study admission interviews.





# MISCONCEPTIONS

- Supervisor should be from UOS and two supervisors not allowed
- Research projects don't need implementation.
- Capstone project can't be done individually.
- Capstone project can't be from web domain.
- For capstone project, evaluation is group based.
- Capstone project should be from the courses that we have studied.
- Research projects don't give programming skills.

# THE **BIG** QUESTION

What if I am unable to complete my project?



# LET OTHERS KNOW - YOUR WORK



March

January

November



April

May



**NaSCon '17**  
where talent meets opportunity





# HOW TO FIND THE PROJECT IDEA?

A large, white, stylized question mark is centered on a dark red background. The background features a fine, repeating grid pattern of small squares, creating a textured effect. The question mark is composed of a thick, curved top and a vertical stem that ends in a small square dot. The overall composition is simple and minimalist, focusing on the central symbol.